Yantras and Mandalas in Temple Worship

॥ नमस्ते जगदेकमातः॥

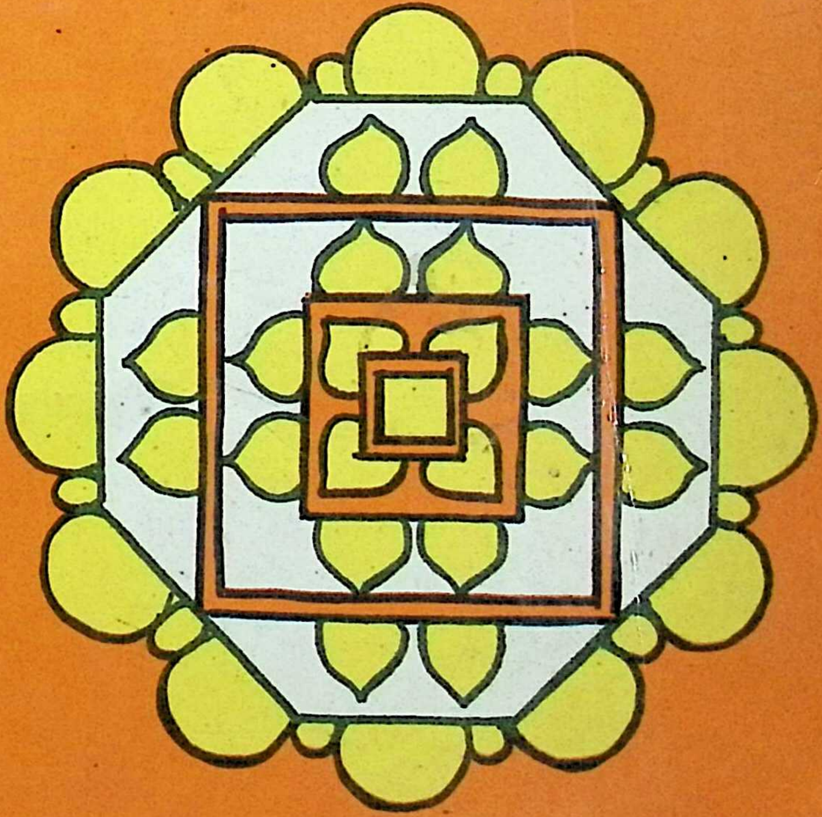
Kalpatharu Research Academy Publication

Chief Editor : DAIVAJNA K.N. SOMAYAJI

MANḌALAS
IN
TEMPLE WORSHIP

Volume One

[redacted]



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Volume One

S. K. Ramachandra Rao

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PROJECT ON YANTRAS AND MAṆḌALAS IN TEMPLE WORSHIP

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PREFACE

Indian culture is the story of incessant endeavour of man to surrender to the Universal Being manifested in various forms to attain the eternal bliss. Art, Music, Literature and all other activities of the man in India are directed and dedicated to the achievement of man's merger with the Universal Consciousness. Our Academy has undertaken the task of illustrating this divine object of man through these kinds of publications. These publications intend to signal the present galloping civilization to stop, look back, think and then proceed towards ultimate truth of humanity.

I have great pleasure in presenting this publication of immeasurable value to the Indian society. This research project involves the detailed study of the various kinds of maṇḍalas and yantras empolyed in temple worship which is first of its kind so far and I hope it will be found very useful to Indologists, Veda and Āgama Pandits and others who are interested in Indian traditional ways of worship. This research project will be prepared in three volumes. The volumes have been planned to be comprehensive including all significant concepts in classical Hinduism in so far as they pertain to worship of images in temples. They are also authoritative as the matter is taken directly from the ancient Sanskrit Agama texts. The volumes are profusely illustrated by line-drawings to accompany textual descriptions. This has been prepared with great devotion by Pujya Sri S. K. Ramachandra Rao, Bangalore, well-known Sanskrit Scholar. He was kind enough to oblige the Academy by agreeing to complete this monumental work as a project of the Academy. The work is acknowledged with respect and admiration.

The Academy is greatly indebted to Ministry of Human Resources Development, Government of India, New Delhi and Government of Karnataka, Banglore for their generous financial assistance which embolden us to embark on this gigantic publication and the interest evinced in this work by the concerned department in both the Governments as a joint venture.

I record with gratitude the accommodation facility given by Sri Krishna Murthy Upadhya of M/s. UPADHYA & Co., Bangalore, for the activities of the Academy.

I personally and on behalf of the Academy thank every one who has associated and has helped in bringing out this publication and more particularly the management and staff of Emem Printing Works, Bangalore.

I am sure that this Book will be a landmark in the sphere of Vedic studies and preserve and nurture the culture and heritage of India.

Bangalore
VIJAYADASHAMI
20 October 1988

Daivajna K. N. SOMAYAJI
Director
KALPATHARU RESEARCH ACADEMY

INTRODUCTION

Temples in India are not merely places of worship. They are themselves objects of adoration. This is because according to the prevalent ideology, the temple is the body of God (ālayam deva-śarīra-bhūtam). And, the icon installed within the sanctum becomes worship-worthy only because of its location within a consecrated area. The temple, in other words, has significance and sanctity of its own. That is why the āgama texts prescribe elaborate conditions to be followed while building a temple. The structure of the temple is made to conform to spiritual models, described with meticulous care and in minute details.

These models are derived from sources which are Vedic as well as tāntrik. They involve linear patterns and circular shapes with many a variation. The concept of "maṇḍala" suggests several of these patterns and shapes, which are significant to a devotee. Different aspects of the temple-structure are justified because of their involvement in characteristic maṇḍalas. Temple architecture becomes unintelligible to one who is not conversant with the lore concerning the maṇḍalas, their preparation, utilization and significance.

An attempt has, therefore, been made in these pages to focus attention on the temple itself as a maṇḍala, and to delineate the meaning and function of the several designs involved in the maṇḍala. The study is based entirely on the Āgama literature, much of which, however is available only in Sanskrit. Altogether incorrect notions about Indian temples are common among scholars who are ignorant of the Āgama prescriptions. This study may help correct some at least of such notions.

This is the first of the three volumes planned to throw light on the inner meaning and esoteric significance of our traditional temples. It deals chiefly with the layout of the temple-space regarded as Vāstu. Illustrations have been taken from actual temples, especially from South India. Many of them, made on the spot, and from a medieval manuscript bearing on temple architecture that I had access to. Attention has been given to the varieties that are in vogue in the ground-plans of temples.

This study was made possible by the interest the Kalpatharu Research Academy has taken, and by the efforts of its Director to mobilize financial assistance for the publication. I am grateful to Daivajna K.N. Somayaji, the Director of the Academy, for the opportunity given to me to collect thoughts on this subject and to collate the information that is available in the original Āgama texts concerning this topic. I also thank the Emem Printing Works who have produced this book artistically and elegantly.

S. K. RAMACHANDRA RAO

KALPATHARU RESEARCH ACADEMY

Institution for :

- Promotion of research-oriented scholarship in Veda, Vedāṅga, Āgama, Jyotisha, Vedānta, Yoga and Ayurveda
- Study of Sanskrit language in particular and other related languages
- Propagation of Vedic phonetics
- Propagation of Hinduism
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* Vāstu Saṁskāra Kalpa
* Shoḍaśa Saṁskāra Kalpa

THE SYMBOLIC SIGNIFICANCE OF TEMPLES

1

The temples are meant to be places of worship (pūjā-sthāna), and worship in its essence is relating the human with the divine. The human being is a field of physical and psychological forces which are beset with limitations, restrictions and disabilities. By contrast, the divine sphere is not so beset. By pressing the divine influences, the human being seeks to overcome the limitations, restrictions and disabilities. Worship is an elaborate reorganisation of the human forces normally at work, so that an opportunity is provided for the play of divine forces within the human sphere. Worship, therefore, involves rituals of physical, psychological and spiritual import. It works with the body, mind, speech and spirit. It has also a cultural dimension insofar as it involes the mores that are prevalent in a society. While worship is essentially individual in orientation, it has also a collective framework.

In India, worship is conducted in household shrines, as well as in public temples. The former is called 'gṛhārchanā' and the latter 'ālayārchanā'. There are characteristic differences between the two kinds of worship. The former is a simpler affair than the latter. Worship at home is conducted to a small metallic icon (not exceeding in height the closed fist of the householder), once a day, and in private. The shrine-room is necessarily a small apartment. The icon acquires the divine status only when worship begins (by a ritual sequence signifying infusion of vital force in the image known as 'prāṇa-pratishṭhā') and loses it when the worship is completed (by another ritual sequence signifying dismissal, known as 'visarjanā'). The shrine-room which houses the icon is thus a place where worship is conducted, and does not have a merit of its own, unlike the temple.

In a temple, the icon in the sanctum (usually a stone image) is permanently endowed with vital force, and possesses a divine status all the time. The worship ritual in a temple does not have to formally invoke the presence, nor to dismiss it when the worship is over. And worship in a temple is conducted several times (three, five or six times, known as 'sandhis'); and each time it is an elaborate ritual. The priest, who is a functionary of the temple, conducts the worship with the help of attendants (parichārakas), in the presence of people who gather there for the purpose. The temple is a consecrated place, unlike the household shrine-room. It has an inherent divine character, owing to the structure as well as the functions that occur in it.

The temple is built according to the prescriptions laid down in the Āgama texts. The temple architecture is not entirely governed by functional needs ; it is essentially symbolic in nature. The texts ordain that the devotee must look upon the temple as the physical body of the deity for whom the temple is built—

> 'prāsādam purusham matvā pūjayet'
>
> (*Śilpa-ratna,* 16,114)

Iśvara-saṁhitā (3,115) explains that the sanctum (garbha–geha) is the deity's head, the tower over the sanctum (śikhara) the braids of the deity's hair ; vestibule (śukanāsī) the nose, the hall in front of it (antarāla) the neck, the large pavilion (maṇḍapa) the torso, the enclosure (prākāra) the arms, and the gateway tower (gopura) the feet :

'garbha–geham śirah proktam
śikhā śikharam uchyate,

nāsikā śuka–nāsī syāt
antarālam galam smṛtam ;

maṇḍapam deham ityuktam
prākārah kara uchyate,

gopuram pāda ityuktam
deva-sthānam prakathyate'

Śrī-praśna-saṁhitā (16, 126), however, asserts that the sanctum is the whole body of the deity, and the icon in it the soul (jīva) :

'garbha-geham tu devasya
śarīram iti smṛtam'

In any case, the temple symbolizes the physical frame for the divine presence. The sanctum, where the icon is installed, is the most important of the parts of the temple ; the icon is the most significant detail in the sanctum—

'pratimā jīva uchyate'

(Vishṇu-tantra, 50)

There can be no temple without a sanctum, and the sanctum is distinguished by the icon installed in it. Many of the Āgama texts, in fact, mean by the expression 'ālaya' (viz. the temple) only the sanctum and the superstructure over it. The temple architecture has evolved with the sanctum as its core.

There is no doubt that functional needs determine the surrounding limbs (aṅgas) : the vestibule (śuka-nāsī) to accommodate the processional images (utsava–bera), the half-pavilion (ardha-maṇḍapa) for several rituals like 'snapana' (bathing the processional image) ; the large pillared assembly-hall (mahā-maṇḍapa or navaraṅga) to accommodate the devotees who gather to witness the worship proceedings ; the 'front-porch' (mukha-maṇḍapa) for entrance ; the enclosures (āvaraṇa) for the worship-detail known as circumambulation (pradakshiṇā), and also for processions of the portable icon on festive occasions ; different halls in the enclosures for specific functions, like 'pāka-śālā' for cooking, 'yāga-śālā' for performance of fire-ritual, 'bhaṇḍāra' for storing jewels, ornaments and garments of the deity, 'vāhana-maṇḍapa' for keeping the large 'vehicles' that are taken out on ceremonial occasions and so on.

The temple in due course became a large complex of services of various kinds, in keeping with the popularity and opulence of the temple. The temple architecture in South India has travelled a long way from the simple rock-cut shrines of the early Chāḷukya and Pallava period to the large structural temples of the Vijayanagar times. The temple came to have greater sculptural ornamentation and structural proliferation, more decorative details, increased administrative positions and closer interaction with political and social forces. To an extent, the purely religious role of the temple suffered with greater opulence and involvement. But the essential symbolism of the temple structure remained unaltered. Whatever the complexity of the temple, the interior of the sanctum continued to be plain in appearance and modest in magnitude. The Āgama requirements were strictly adhered to.

It must be noted that of the five types of temples enumerated in the Āgama texts (like *Pārameśvara-saṁhitā* 89, 62 and *Padma-purāṇa*, uttara, 39, 14-20), the temples built by human beings (mānusha) are regarded as the most inferior. The order of excellence begins with the humble shrines, where the deity is self-manifest (svayam-vyakta) in the sanctum, followed by the shrines built by gods (daivika) in the remote past, the shrines built in the forests by sages (ārsha) in ancient times, and the temples built during the medieval times and associated with legends (paurāṇika), which are increasingly inferior in merit.

The temples built by kings and chieftains who are apparently moved by piety may indeed be monuments of their wealth and vanity. These temples, in contrast to the others, may be ornate in style and richly endowed, large and impressive, but the holiness of the shrine is not ensured by these details. The icons are made by sculptors who are wage earners and installed by priests who are hired for the purpose. Although the installations are made according to Āgamic prescriptions, the men who do it may lack the power of penance. And the priests who are employed to worship in the temple may be farther removed from penance and holiness. In such circumstances, the divine presence in the icon becomes a far cry. That is why the texts assign to these temples the lowest position.

Hence the well-known saying that the divine presence of an icon in a temple is dependent upon the power of the priest's penance :

'pratimāyām tu sānnidhyam
archakasya tapo-balāt'

The point of interest in this classification of temples is that it is the icon indeed that provides significance for the shrine, and that the shrine does not contribute to the icon's power. The icon, on assumption, is the centre of the forces that operate in a temple, and the sanctum is the immediate field for the organization and crystallization of these forces. Structures around the sanctum serve to channelize these forces and protect them from diffusion and dilution. The koshṭha-cells on the outer walls of the sanctum, the half-pavilion (ardha-maṇḍapa), the enclosures (āvaraṇa), the guardian deities of the quarters (dikpālās), the attendant divinities (parivāra-devatās) and the superstructure (vimāna) answer to this description.

The textual prescription is that the sanctum must be constructed before the other parts of the temple are built. And the construction of the sanctum presupposes sanctification of the ground (bhū-śodha), and a ritual known as 'womb-installation' (garbha-nyāsa). The ritual consists of impregnating (or burying deep in) the central portion of the area meant for the sanctum with a copper pot (kalaśa) filled with nine kinds of precious stones, (nava-ratna), herbs (oshadhī) and other relevant materials (collectively called 'dhātu'), and covering this with a stone slab (ādhāra-śilā), over which the icon (biṁba or bera) is installed on a seat (pīṭha).

The copper pot hidden beneath the icon which is technically identified with 'mother-nature' (prakṛti), the stone slab over it which is regarded as the 'base' (tala), and the icon's seat (pīṭha) are welded firmly into one piece by a ritual and technique known as 'bandha'. According to the texts like *Iśāna-śiva-guru-deva-paddhati*, *Tantra-samucchaya* and *Śilpa-ratna*, the copper-pot is the 'womb' (garbha), the icon that emerges from it is the 'soul' or 'individual' spirit (jīva), and the sanctum is the 'body' (deha). This is why the traditional name for the sanctum is 'womb-house' (garbha-gṛha). This also explains why the sanctum is the core of the temple, and how in many texts the expression 'ālaya' (*viz.* the temple) refers only to the sanctum.

Futher, the sanctum is said to symbolize the universe, constituted by the five primary and universal elements (tattvas) : 'earth' (pṛthvī), 'water' (apa), 'fire' (tejas), 'air' (vāyu) and the formless 'ākāśa'. The foundation of the sanctum (adhishṭhāna) represents the 'earth' element, the walls of the sanctum (bhitti) the 'water' element, the superstructure over the sanctum (vimāna) the 'fire' element, the finial pot (kalaśa) on top of the superstructure the 'air' element, and the pointed needle (stūpī) on top of the pot the formless 'ākāśa' element.

Pārameśvara-saṁhitā (10,4-7) says that the sanctum represents the entire visible cosmos (brahmāṇḍa), consisting of seven realms (lokās). The ground of the sanctum is the 'earth' (bhū-loka) ; the walls or the columns of the sanctum represent the 'bright vault' (suvar-loka) ; the roof over the sanctum (known as 'prastāra') is the 'expanding realm' (mahar-loka) ; the tower over it (śikhara) is the 'realm where all birth occurs' (jano-loka), the egg-shaped copper pot ('kalaśa', 'aṇḍaka', or āmalaka') the 'realm of austerities' (tapo-loka) ; and the pinnacle (stūpī) is the 'realm of truth' (satya-loka).

It was already mentioned that the temple is the body of the deity installed within its sanctum. In accordance with this symbolization, the sanctum is said to represent the face (mukha), and the position where the icon is installed is the spot where the eye-brows meet (bhrū-madhya) ; the superstructure over the sanctum (vimāna) is the top of the head (ushṇīsha).

There is another explanation, which points out that the temple is, in reality, the architectural expression of the human structure. This explanation takes into consideration the temple-complex of an evolved style. According to this, the feet of man are represented in the gateway-tower (dvāra-gopura) ; the legs are the entrance hall (mukha-maṇḍapa) ; the waist with the genital organ in the centre is the place where the flag-post (dhvaja-staṁbha) is erected ; the belly region is the assembly-hall (mahā-maṇḍapa or navaraṅga) ; the heart is the vestibule (antarāla) or the inner apartment (antar-maṇḍala) ; the head is the sanctum, and the place where the eye-brows meet is where the seat of the icon (pīṭha) is seen.

This explanation brings out the esoteric significance of the temple, and teaches that the devotee's body itself is the temple, and the individual spirit or 'soul' is indeed the deity to be adored :

'deho devālayah proktah,
jīvo devas sanātanah'

EVOLUTION OF THE TEMPLE IDEA

2

There is a belief, widely current among scholars, that the Hindu temple architecture in India had the Buddhist stūpa in its background. But it is not generally known that the Buddhists adopted the stūpa from a Vedic source. The word 'stūpa' occurs in the Vedic corpus, as for instance in the expression 'Vishṇoh stūpam' in Yajur-veda. The word 'stūpa' however, is of uncertain origin. It is explained by grammarians as referring primarily to elevation ("stūpayati dhānyam kṛshakah") and 'mud made into a mound' ("rāśīkṛta-mṛttikādih"). The word stūpa, thus, means a mound, a heap, a pile.

The Buddhist stūpa is essentially a mound, a sepulchral tumulus, a pile of mud, bricks or stone to mark the place with holy associations, or to house some precious relic (dhātu) like the mortal remains of a saint (śārīrika), the utensils or garments that he was using (pāribhogika), or some symbol representing the saint (e.g. the 'wheel of law', 'the triplegem') (uddeśika). The relic (dhātu) is of vital significance for the devotee, and the large mound hiding it is known as the structure containing the relic in its womb (dhātu-garbha, corrupted as 'dagoba'). The Buddhist stūpa is thus a relic-shrine, a funerary mound, or a monument to the memory of a great personage.

The word 'stūpa' (which occurs in Greek as 'stupos') also means 'crest', 'summit', 'upper part of the head (ushṇīsha)', 'tuft of hair on top of the head'. The top-most member of the superstructure over the sanctum of a Hindu temple has always been called the 'stūpī', (cupola or pinnacle), suggesting that the top portion of the superstructure (viz. the kalaśa) was called a stūpa. An ancient treatise on Sanskrit grammar *(Samkshipta-sāroṇādi-vṛtti)* gives another meaning of the word stūpa : 'power' ('balam'). The 'summit' is not merely that which is on top of everything else, but also that which is the most potent member. The power of the 'summit' consists in its giving a unitary character to the whole assemblage (saṁghāta).

Jouveau-Dubreuil drew our attention as early as 1922 to the fact that the Buddhist stūpa was derived from the Vedic tumulus known as 'Agnidriya', which was a hemispherical and hollow vault with a central shaft serving as a support for the dome (cf. his *Vedic Antiquities,* 1922, Second edition 1976). He pointed out that the central shaft was in reality a chimney leading to the summit of the dome. It was this that in a Buddhist stūpa became the 'harmikā' (from *harma* meaning 'yawning', 'an opening'), a sort of altar on the summit or pavilion on top of the tumulus, indicating the exact position of the dhātu at the ground level.

We have other evidences to suggest the pre-Buddhist origin of the Buddhist stūpas. The *Kalpa-sūtras* (especially the *Śulba-sūtras*), which are accessories to Vedic corpus, contain accounts of different kinds of altars or platforms (vedi), each appropriate to a ritual (yajña). The collection of bricks for the purpose and the arrangement of the bricks in characteristic shapes were known as 'chayana', 'chiti' or 'stūpa'. The first two words denote assemblage (saṁghāta), while the third one is explained as a shape resembling a knot of hair (keśa-bandha). Texts like *Taittirīya-saṁhitā* (5,4,11) and the *Śulba-sūtras* not only enumerate different fire altars (chitis), but name them. And the names are given in accordance with the shape that the altar acquires on the top-most layer. While addressing the consecrated fire-altar, the performer of the sacrifice was required to say "Thou art the stūpa of Vishṇu" (Vishṇoh stūpo'si).

The Vedic altars, the Buddhist topes and the later-day temples constitute thus a continuum. In all these examples, the essential import is the hidden power regarded as the 'womb of power' (suggested in the synonyms 'dhātu-garbha' and 'garbha-gṛha' for the stūpa and the temple respectively). Indeed, the Vedic altar was meant to provide a base (adhishṭhāna) for fire to blaze forth (agnīdhra); and fire was the visible deity for the Vedic worshipper. Fire was the icon (pratimā) which in due course became the 'dhātu' in the tope and 'bera' in the temple. The 'chiti' of the Vedic times was the inspiration for the 'chaitya' (viz. the structure meant for assembly and worship) of the Buddhist period. In Nepal and Tibet, 'stūpa' and 'chaitya' are synonymous expressions. 'Chaitya' was an old expression for the temple; and the tree specific to a temple was always known as 'chaitya-vṛksha' (as in *Rāmāyaṇa* of Vālmiki, 5,12,17). The Jains too recognize their temples to the tīrthaṅkaras as 'chaityālayas'.

It is wrong to imagine, as for instance Hermann Goetz has done (*India : Five Thousand Years of Indian Art*, 1959, p 46), that the Buddhist Stūpa evolved from the 'Vedic burial mound'. There is also a confusion with regard to the early and later meanings of the word 'chiti'. The word now means a funeral pyre, but in the Vedic context it meant only a fire-altar. The chitis (or more properly chits) described in the *Śulba-sūtras* are by no means funerary in import ; they relate to the mystic fire, meant for worship. And the word 'stūpa' used in the Vedic context meant precisely that : fire as a visible symbol of the divinity. We have no clue, archaeological or literary, as to the nature of the 'Vedic burial mounds' (if indeed there were any).

However, there is some truth in the argument of N. Venkataramanayya that temple (especially to Śiva) in South India were connected with grave-yards (cf. *An Essay on the Origin of South Indian Temple*, Madras, 1930). The Chola monarch, Āditya I, is recorded to have built a shrine over (or near) a burial ground (paḷḷippaḍai) in Toṇḍama-nāḍu, and another Choḷa monarch built the Ariñjiśvara temple in the paḷḷippaḍai of Aṛrūr. Śiva temples built over the mortal remains of saints and kings are not uncommon in South India ; and temples built in memory of deceased persons of eminence are also frequently to be met with. It is also true that the Toḍa 'azārams' and dolmens which are 'houses of death' (Sāvu-mane) were sometimes places of worship.

But it is incorrect to say that this is how temples began. All that can be said is that the temple idea was adopted in cases of monuments of celebrities, because the deceased person had supposedly gone beyond the mortal limitations and had attained divine status. Not every grave, however, was a temple, either in design or in effect. The funeral mounds were not necessarily objects of worship. And even when the 'paḷḷippaḍai' (grave-yard) was invested with the idea of Śiva's presence, there were other temples in the village or town, dedicated to Śiva and other deities. It is not the fact of death that is basic to the conception of a shrine, but it is the mystery or magic associated with some persons or objects that is of fundamental importance. A temple is by definition an abode of supernatural power.

Mention was made of the *Śulba-sūtras* (supplementary portions of *Kalpa-sūtras*), which provide information regarding the principles and methods of construction of several types of fire-altars (vedī). The altar built of bricks was specifically known as 'chiti' or more properly 'chit' which according to *Kāśikā* is 'assemblage of bricks for the sake of fire' ('agnyartha ishṭakāchayah'); and this was prescribed to be constructed during the Soma-sacrifices. *Taittirīya-saṁhitā* (5,4,11) also contains information about the shapes of different 'chitis'. The chiti was built by bricks arranged in five layers, each layer consisting of two hundred bricks. The total number of bricks used in a chiti was thus one thousand, a mystic number. The ritualistic treatises prepared by Baudhāyana and Āpastaṁba contain details of shapes of several 'chitis'.

When the bricks arranged to form an altar resemble the shape of a falcon (śyena), the altar is known as śyena-chiti. The Indian falcon is a violent and terrible bird of large size which is described as 'fond of war' (raṇa-priya) ; its movements are of value for prognostications (śakuna). Prasanna Kumara Acharya, the late eminent expert in Indian architecture, has reconstructed different brick-arrangements in 'śyena-chit' types. Bricks used in this altar are square in shape (chaturasra). (cf. *Indian Architecture,* Indological Book Corporation, Patna).

Other shapes of the chit are those of 'kaṅka' (heron), 'alaja' (another bird, of uncertain identification), 'prayuga' (equilateral triangle), 'ubhayatah-prayuga' (two equilateral triangles joined at their bases), 'ratha-chakra' (chariot-wheel, with or without spokes), 'droṇa' (a pot of measure), 'samūhya' (circular in arrangement) and 'kūrma' (tortoise). We find here the genesis of the later architectural forms, and involvement of five major shapes that determined the types of buildings, square (vairāja), rectangular (pushpaka), circular (kailāsa), oval (maṇika) and octagonal (tri-vishṭapa) (as for instance in *Agnipurāṇa,* 104,5, 11-13).

The construction of Vedic altar out of bricks, and in accordance with a prescribed shape, contained the nucleus of the later architectural principle of the 'site-plan' (pada-vinyāsa), or division of the entire area into numerous well-defined smaller plots, square, rectangular or circular in shape. *Māṇasāra* (7,2,50), for instance, enumerates as many as thirty-two kinds of 'site-plans', beginning with the site-plan consisting of but a single plot (sakala) and ending with the site-plan (known as chandrakānta) which has one thousand and twenty-four plots. The ten important site-plans are :

sakala (with one plot)
paiśācha (with four plots)
pīṭha (with nine plots)
mahā-pīṭha (with sixteen plots)
upa-pīṭha (with twenty-five plots)
ugra-pīṭha (with thirty-six plots)
sthaṇḍila (with forty-nine plots)
chaṇḍita (with sixty-four plots)
parama-śāyika (with eighty-one plots)
and āsana (with a hundred plots)

Of them, the site-plan with sixty-four plots is regarded as the best for temples, and a site-plan with eighty-one plots for human abodes :

'chatuh-shashṭipadam vāstu
sarva-deva-gṛham prati'

ekāśīti-padam vāstu
mānusham prati siddhidam.

The idea of 'vāstu-purusha' as residing in the site-plan with sixty-four cells is also of Vedic origin. Vāstu, originally meant place of residence ('vasanti prāṇinah yatra') ; it included the site as well as the building raised on it. The Vedic corpus speaks of the 'lord of the site'

(Vāstoshpati) in this sense. According to the interpretation offered by the glossator, Deva-rāja-yajvan, the word 'vāstu' refers actually to the atmosphere or mid-region (antariksha), and therefore 'Vāstoshpati' is a group of deities that dwell in this plane. Actually, Vāstoshpati is a name of Indra, in the Vedic references. Even now, when the construction of a building on a site is to begin, Vāstu is customarily and formally worshipped, and on this occasion, a hymn to Indra is recited.

The conception of Vāstu-purusha engendered the idea of 'maṇḍala' (which will be explained later), the area with natural divisions being alive with deities in each division contributing to the mystic effect of the entire site. The Buddhist stūpa also had its natural divisions, and texts like *Kāraṇḍa-vyūha-sūtra* speak of 'stūpa-maṇḍala' (a synonym of 'vāstu-biṁba') as the total area of the tope with divisions, endowing on the building a mystic effect, without which the stūpa is devoid of significance. Likewise, the temple is essentially a maṇḍala, and it is in this that its significance lies.

VĀSTU AND MAṆḌALA

3

The expression 'maṇḍala' associated with sites and buildings is also of Vedic origin. We find in *Taittirīya-saṁhitā* (5,3,9,2) and in *Śatapatha-brāhmaṇa* (4,1,1,25) that bricks which were circular in shape were called 'maṇḍaleshṭaka'. Maṇḍala really means a circle. *Ṛgveda* (4,28,2 and 2,3,3) refers to the solar disk in terms of a maṇḍala (or chakra). The full lunar orb and the solar orb in later literature were called 'Chandra-maṇḍala' and 'Sūrya-maṇḍala' respectively. The maṇḍala in the Vedic corpus was another term for wheel (chakra) or ball. Expressions like 'maṇḍala-nṛtya' (circular dance), 'maṇḍala-nyāsa' (drawing of a circle), 'maṇḍalāsana' (sitting in a circle), and 'maṇḍala-nābhi' (centre of a circle) were frequently employed in post-Vedic literature to suggest the idea of circular arrangement of details, viz. with a central point to which all the details are equidistant. A circle symbolizes entirety, completion, the cosmos, and also integration of details.

The measurement of the fire-altars (chiti) for the Soma-sacrifice, as detailed in the *Śulba-sūtras,* involves the idea of retaining the area constant, despite variety in shapes. The area of every altar whatever the form, was prescribed to be the equivalent of seven and a half squares or 'purushas', (the 'purusha' being the height of a man with his arms lifted up). In this calculation, it was suggested that the area of a circle must correspond with the area of a square. This is how squares were turned into circles, circles into squares, squares into oblongs, triangles into squares and so on, always with the centre being fixed regardless of the form.

Thus, the idea of a maṇḍala, which originally meant only a circle, was adapted to different emergent forms such as square, rectangle, triangle and many-sided figures. In the site-plan (pada-vinyāsa) of Vāstu, the division of the area into plots was meant to project a form or shape of significance as a maṇḍala. In this, the central position was of utmost importance. In the building, Vāstu, thus, is represented by the area known as 'brahma-sthāna'. The centre is the seat of mystic power which 'grows into' (which is the exact meaning of 'brahma', from the root 'bṛh', 'to grow') the Vāstu-form, a square, a circle, a rectangle, and so on. The power of the centre spreads over the entire area, and makes it potent. That is why the central point is looked upon as the seed or source of the maṇḍala. The maṇḍala as the world of spirits projected from the central source of divine power has rightly been called a psychocosmogram.

The principle of maṇḍala is to project a subjective space around a nucleus. It is the layout of a world, which is significant for the tradition or for a devotee. The temple is thus a 'maṇḍala' in plan and in effect, with the sanctum in the centre. The space around the sanctum is arranged both horizontally and vertically, in physical apartments (maṇḍapa), enclosures (āvaraṇa) or 'limbs' (aṅgas), to symbolize aspects of the deity installed within the sanctum. Various forms are involved in this arrangement, and each form has a symbolic significance.

The temple, for instance, is the whole universe in miniature and all the primary elements that constitute the universe are involved in the structure. Each of the five major and ultimate elements (tattva) has been symbolized by a geometrical form which in turn represents a fundamental process in the universe. The 'Earth' element is symbolized in a square (chaturasra) and it represents extension and cognition (jñāna). The 'Water' element is symbolized in a half-moon form (ardha-chandra) and it represents energy (rajas). The 'Fire' element is symbolized as a triangle with upward apex (trikoṇa) and it represents 'tamas'. The 'Air' element is symbolized in a hexagon (shaṭ-koṇa; when two triangles are interlocked, it is called star-hexagon) representing movement (kriyā). The 'Ākāśa' element is symbolized in a circle (vṛtta), and it represents unity of all the above qualities (sattva). The temple-structure involves all these forms. And in texts like *Yoga-tattvopanishat* (84-98), the five elements are assigned to five parts of the human body, which again are involved in the temple architecture: from feet to the knees is the region of the 'Earth' element; from the knees to the loins, of the 'Water' element; from the loins to the heart region, of the 'Fire' element; from the heart region to the place where the eye-brows meet, of the 'Air' element ; and from the meet of the eye-brows to the top of the head, of the 'Ākāśa' element.

The sanctum is usually square in shape, suggesting the 'Earth' element, and the icon is normally situate on an open lotus, which is circular (the 'Ākāśa' element). The icon itself is symbolic of the dimensionless point (bindu). While making the aniconic liṅga, the bottom portion which is hidden under the ground is squarish in shape, and the top portion (to which worship is conducted) is circular in form.

'bhūmistham chaturasram syāt
pūjārtham vartulam kāryam'

Kāmikāgama prescribes that temples and houses of learned priests must be square in shape, while the palace may be octagonal, hexagonal or square in shape ; circular or triangular buildings are not commended—

Chaturasram samam yat tu
devānām cha dvijanmanām,
ashṭa-shaṭ-chaturasra-yuktam
nṛpa-veśmayoh,
maṇḍalam cha trikoṇam ca
adhamam parikīrtitam.

The idea of the building-site being personified as a demi-god or a spirit

(Vāstu-purusha) is an ancient one. Early texts like *Bṛhat-saṁhitā* visualize a monster, human in form but giganticin dimensions, lying on his belly covering the entire earth, and his body concealing the mid-region (antariksha). There are various accounts of his origin. According to one (viz. *Tantra-sāra-saṁgraha* of Madhva), he is the son of Vishṇu in his incarnation as Varāha. According to another *(Matsya-purāṇa)*, he is the son of Kāśyapa and Simhikā, and brother of Rāhu (the head portion of the body of the dragon-spirit, which was cut asunder by Vishṇu as Mohinī, the other portion of the body being Ketu).

But the more popular account (in *Matsya*, chapter 226) is that he is a demon (bhūta), who was born out of the sweat of Śiva as it fell to the ground. The occasion was the fight between Śiva and the asura named Andhaka. Śiva had assumed the terrible form (ghora-rūpa), and the drop of sweat that fell from his forehead was hot and violent. The demon that arose from that was also violent, with a hideous and aweful face, and with ravenous hunger, ready to eat up the whole earth and the upper regions. He enveloped all existence with his body, but all the gods (the denizens of the upper regions) united and pressed him down to the ground. As he fell with his face downward, the gods sat upon his body and secured him with 'ashṭa-bandha'.

Because the gods took positions and dwelt on his body (in order to pin him down), the demon was called 'Vāstu-purusha'. His form as he lay helpless on the ground was square (chaturasra), and he is almost always asleep, with his head resting on his left shoulder. He changes the position of his head during the year several times.

His head is in the Eastern direction during the stellar months beginning with Kanyā and ending with Vṛśchika (roughly corresponding to the period extending from September to November) ; it will change to the Southern direction during Dhanus to Kuṁbha (December to February) ; it will turn to the Western direction in Mīna-Vṛshabha (March to May), and to the Northern direction in Mithuna-Kaṭaka (June to August).

The demon is said to wake up occasionally in some months and each time he is awake for three and three-fourths ghaṭikās (about one and half hours). The duration of his wakefulness is regarded as auspicious ; and construction work on buildings fares well if its commencement synchronizes with this period. The demon is sought to be fed and placated before any building is sought to be raised on the site (and this is called vāstu-pūjā, vāstu-bali, vāstu-homa) ; and during this ritual, the gods that are located on various parts of the demon's body are also worshipped. And the builders of houses will take care to avoid the area of the site that falls within the line of his vision and the area that is in contact with his feet. The place where the demon's heart is placed is also the seat of the chief of gods, Brahmā (viz. Brahma-sthāna).

The site occupied by this demon is always square (chaturasra), and is principally classified into two types : one with sixty-four (chatuśśashṭi) equal divisions suitable for temples, and the other with eighty-one (ekāśīti) divisions suitable for human residence. In each of the divisions, a god is indicated, and the expression 'vāstu' is said to be a collective name for all these gods ;

'vāstus sāmūhiko nāma
dīpyate sarvatastu saḥ'

The arrangement of the areas within the site, along with their divinities, is known as 'vāstu-maṇḍala', and it assumes different architectural plans (in terms of several groupings of the sixty-four or eighty-one divisions, 'pada-vinyāsa'). Among the major plans for temples, given in texts like *Agnipurāṇa* (54,11-13) and *Kāmikāgama* (35,87,91) are the following :

1. Vairāja (square or quadrangular) with its nine varieties : Meru, Mandara, Vimāna, Bhadra, Sarvatobhadra, Charuka (Ruchaka), Nandika, Nandi-vardhana and Śrīvatsa.

2. Pushpaka (rectangular), with its nine varieties Śālā-gṛha, Valabhī, Viśālā (called Vimāna elsewhere), Brahma-mandira, Bhuvana, Prabhava, Śivika-veśma, Sama and gṛha-rāja.

3. Kailāsa (circular), with its nine varieties : Valaya, Dundubhi, Padma, Mahā-padmaka, Śaṁkha, Kalaśa or Ushṇīshī, Vardhanī, Mukuli, Sva-vṛksha.

4. Maṇika (oval, vṛttāyata) with its nine varieties : Gaja, Vṛshabha, Haṁsa, Garutmat (Garuḍa), Ṛksha-nāyaka, Bhūshaṇa, Bhūdhara (or Bhū-mukha), Siṁha and Śrī–jaya.

5. Tri-vishṭapa (octagonal) with its nine varieties : Vajra, Chakra, Swastika, Chitra, Gadā, Vijaya, Mushṭika, Vijayā and Śrikaṇṭha.

The total makes forty-five types, and they illustrate the major geometrical forms crystallized in the Āgama texts. *Kāśyapa-śilpa* (25,41-*Mānasāra* (13,24-25), *Maya-mata* (19,36), *Suprabheda* (31,29) and *Kāmikāgama* (49,90) mention three types of temples : (1) Nāgara (associated with Vishṇu) (2) Drāviḍa (associated with Brahmā), and (3) Vesara (associated with Rudra). The distinguishing characteristics of these types relate to geometrical forms. The Nāgara temples are square (chaturasra) or rectangular (āyatāsra) in form, while the Drāviḍa temples are octagonal (ashṭāsra), hexagonal (shaḍasra) or their stretched out (āyata) forms ; and Vesara (the term 'vesara' being the corrupt form of 'vyasra' or 'devoid of angles', vigata-asra) temples are circular (vṛtta), oval (vṛttāyata), or apsidal (dvyasra-vṛtta). Of course, the specification relates to the sanctum and the superstructure over it. We read in *Īśāna-śiva-guru-deva-paddhati* (3,38) :

> "Śikharasya tu bhedena
> Sarveshām bhedam uddiśet"

But the forms considered suitable in temple-architecture have actually been derived from site-plans and the aspects thereof. The idea of vāstu-maṇḍala provided the scheme for the horizontal arrangement of pavilions as well as for the vertical arrangement of four or six 'members' ('chatur-varga' or 'shaḍ-varga'). The horizontal arrangement involves the position of the sanctum (garbha-gṛha), corridor around it for circumambulation (pradakshiṇā-patha), vestibule (antarāla), half-pavilion (ardha-maṇḍapa) assembly-hall (nava-raṅga), entrance-porch (mukha-maṇḍapa), enclosures (āvaraṇas) and entrance-pavilions (dvāra-śālā).

The vertical arrangement in the six-limbed temple consists of basement (adhishṭhāna), wall and pillars (bhitti, staṁbha-varga), entablature (prastara), neck (kaṇṭha), dome (śikhara) and pinnacle (stūpī). All these have distinctive geometrical shapes, relevant to the vāstu-maṇḍala.

[redacted]

Illustrations

Figure : 1

Vedic sacrifices involved elaborate and precise altars on which the fire was installed and offerings were made. The shape of the altar (vedi) had to represent the purpose and the main sequences of the sacrifice.

The illustration shows the altar in the shape of a falcon in flight, and this was technically known as "śyena-chit". This altar was used in several sacrifices, but more importantly in the Soma sacrifices. The bird was associated with the bringing of Soma from the celestial regions to the earth (*Ṛgveda*, 4, 26 and 27). The name 'śyena' etymologically means "praiseworthy movement" (śaṁsanīya-gatih), and metaphorically signifies the Gāyatri metre.

The central rectangular form is regarded as the "womb" (garbha) of the fire-god ; and Soma is believed to emanate from this source and enter into the "womb" of the sage who performs the sacrifice.

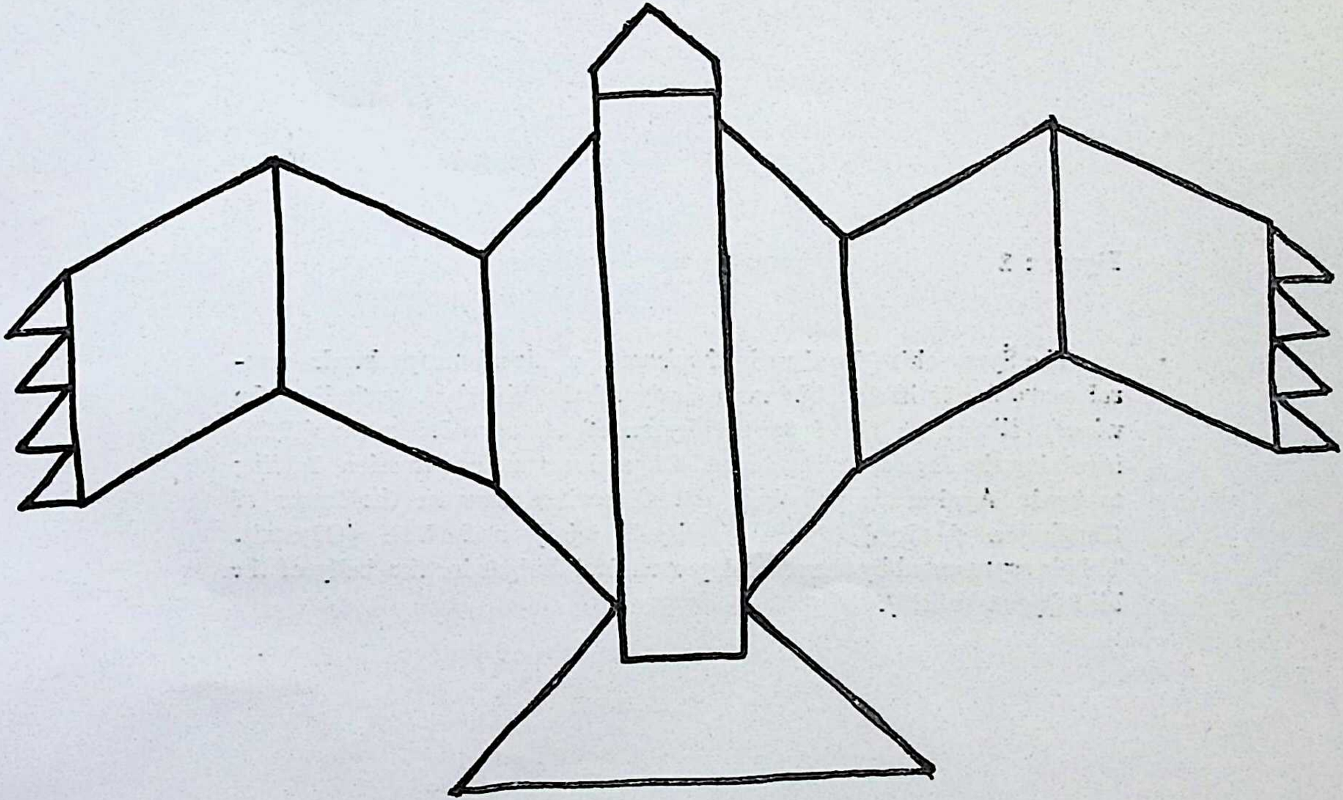


Fig. 1

Figure : 2

The Śyena-chit (the altar in the form of a falcon) comprehends several maṇḍalas in itself. The main body of the bird (viz. excluding the wings) illustrates the Sauparṇākhyāna of *Aitareya-Brāhmaṇa* (13,25) involving the Jagatī, Trishṭubh and Gāyatri metres in succession leading to Agni. Agni as the principal god of sacrifice assumes the forms of Gandharva (Āditya), Soma (Āditya's tejas) and Vāk (Gāyatri). This is represented by the several geometrical designs in the belly of the bird (śyena-kukshi).

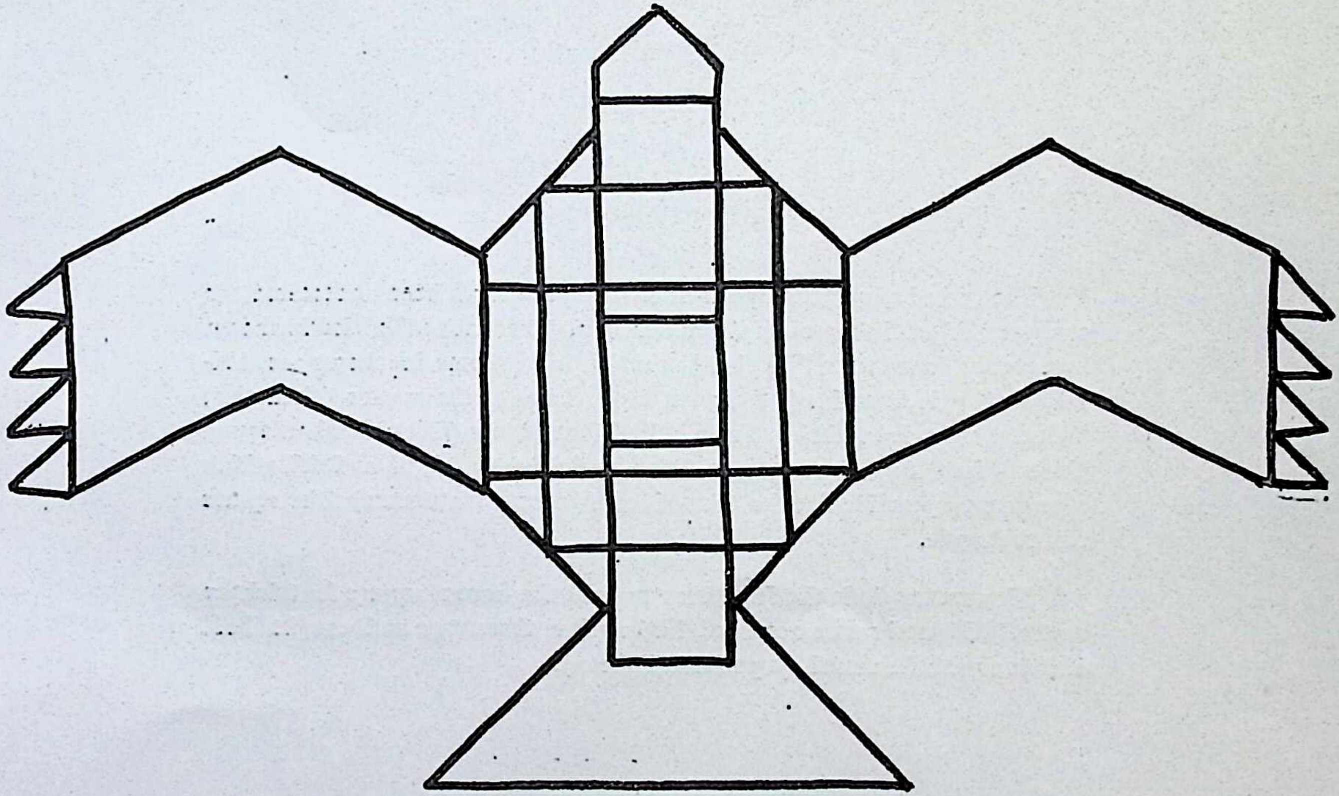


Fig. 2

Figure : 3

The main body of the Śyena-chit is represented here indicating the passage of Agni in the central vertical line. The tail of the bird is shown here as the foundation (pucchhah pratishṭhā). Soma is shown as abiding in the third realm (tṛtīyasyām divi). Each of the metres (chhandas) When it ascended to bring Soma it had four letters (Chaturaksharāṇyeva chhandāṁsyāsan), according to *Aītareya-Brāhmaṇa*, 13, 25 and 26, which idea was responsible for the four-sided figures (chaturasra) like square and rectangle.

The rectangle is the Jagatī metre, and the inner square is trishṭup metre. Gāyatri metre ascended higher than these two and caught hold of Soma with its mouth (represented above).

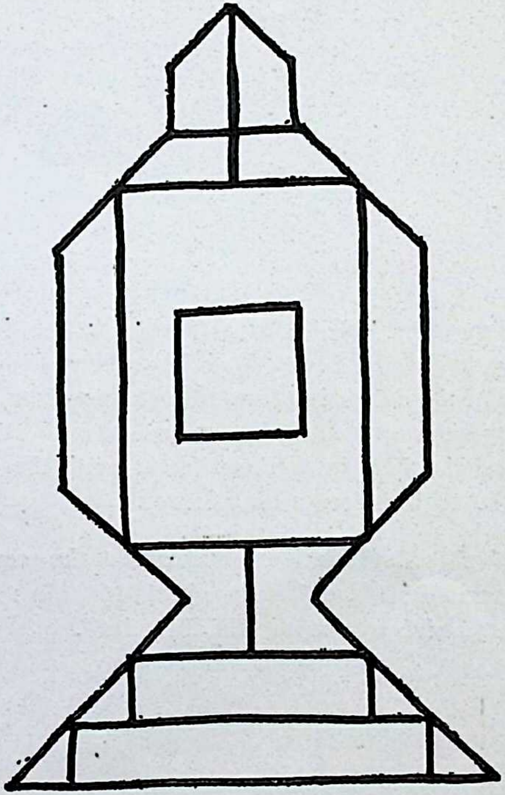


Fig. 3

Figure : 4

The upward movement of the Gāyatri metre in the Somāharaṇa-prasaṅga (*Taittirīya-saṁhitā,* 6, 1, 6, 1-3), is here shown ("udapatan"). And also the division of the ascent in terms of prātas-savana, mādhyandina-savana and sāyam-savana, the first by the tail (pucchā), the second by the belly (kukshi) and the third by the head (śiras) with the mouth (mukha) facing the celestial regions (containing Soma).

This part of the altar design emphasizes the emergence of tree (vṛksha) as the symbol of Agni (cf. *Ṛgveda,* 1, 164, 22) : "yasmin vṛkshe madhvadas suparṇā nivisante suvate chādhi viśve".

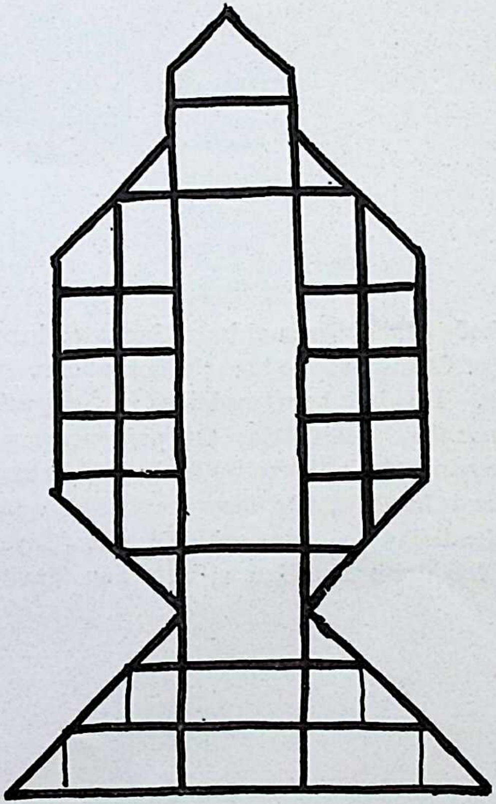


Fig. 4

Figure : 5

The main body of the Śyena-chit is illustrated here in terms of the three 'savanas' of Gāyatri as she brought down Soma from the realm of the Gandharvas. This has been explained in *Śatapatha-Brāhmaṇa*, 4, 2, 4, 10 : Gāyatri at the head carries the prātas-savana ; trishṭup (three divisions of the rectangle in the belly) in the middle carries the mādhyandina-savana ; and Jagati at the base (pucchā) the sāyam-savana. All three parts of the design represent only Gāyatri (Gāyatrāṇi vai sarvāṇi savanāni), and Gāyatri is identified with the Sun (Savitṛ).

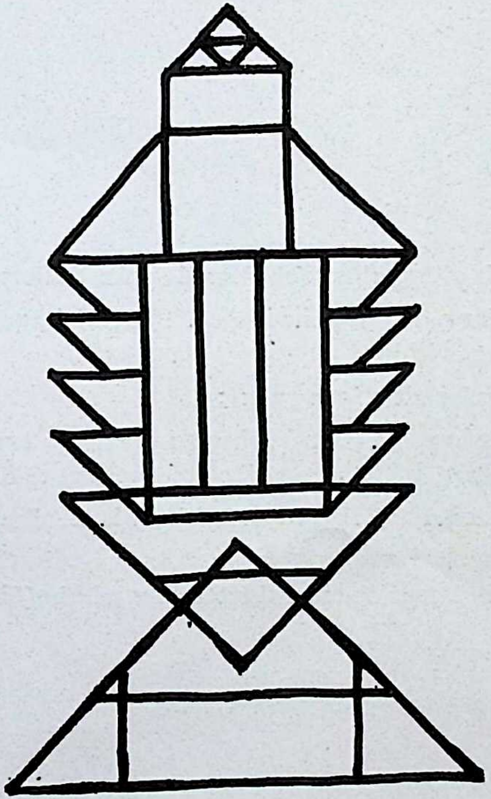


Fig. 5

Figure : 6

Other kinds of fire-altars (chit) used in the Vedic period :

(a) circular altar (pari-maṇḍala-droṇa), with square and rectangular arrangements within ;

(b) triangular altar (pra-yuga) ;

(c) twin-triangular altar (ubhayato-prayuga), two triangles being joined at their base, with a cross-like arrangement of bricks within ;

(d) circular altar, shaped like the wheel of a chariot (ratha-chakra) ; and

(e) square altar with crossed rectangles within (ūhya).

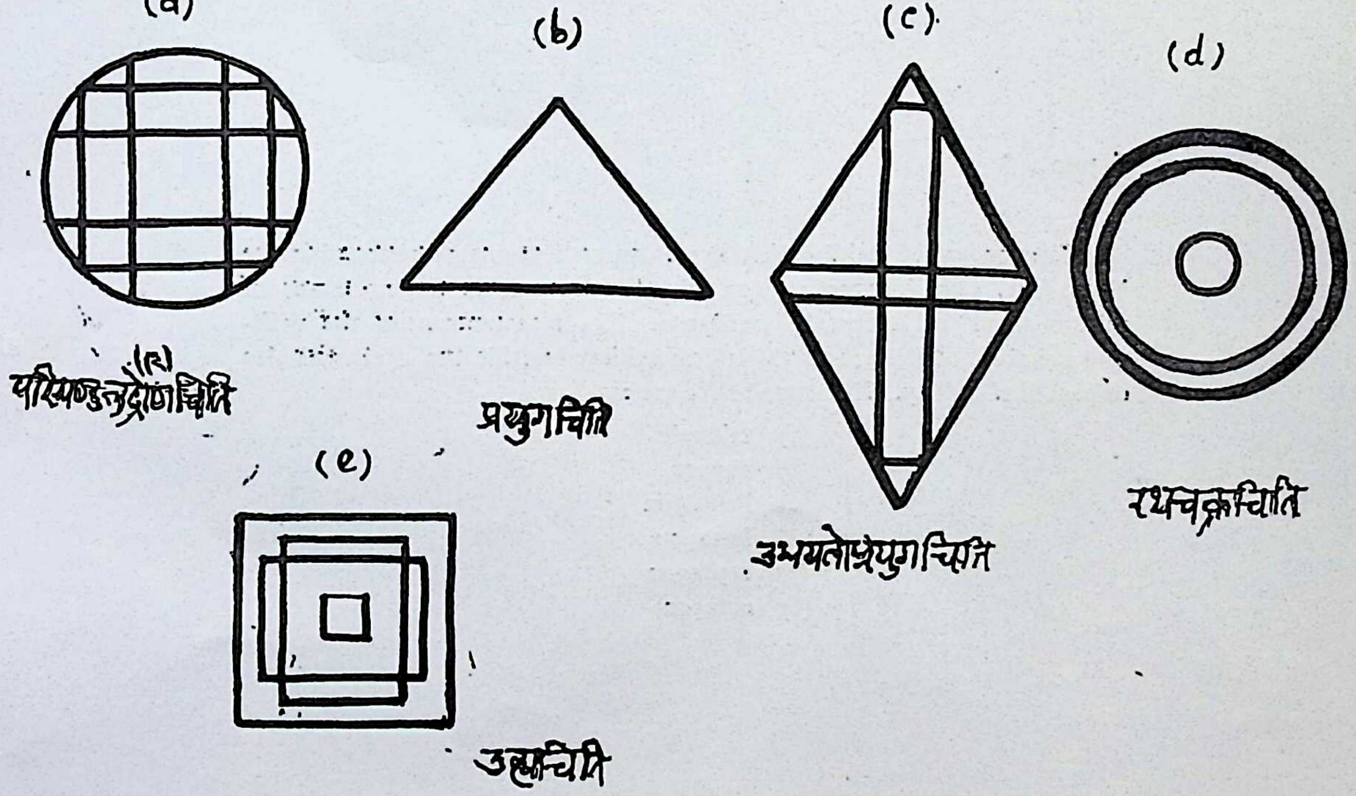
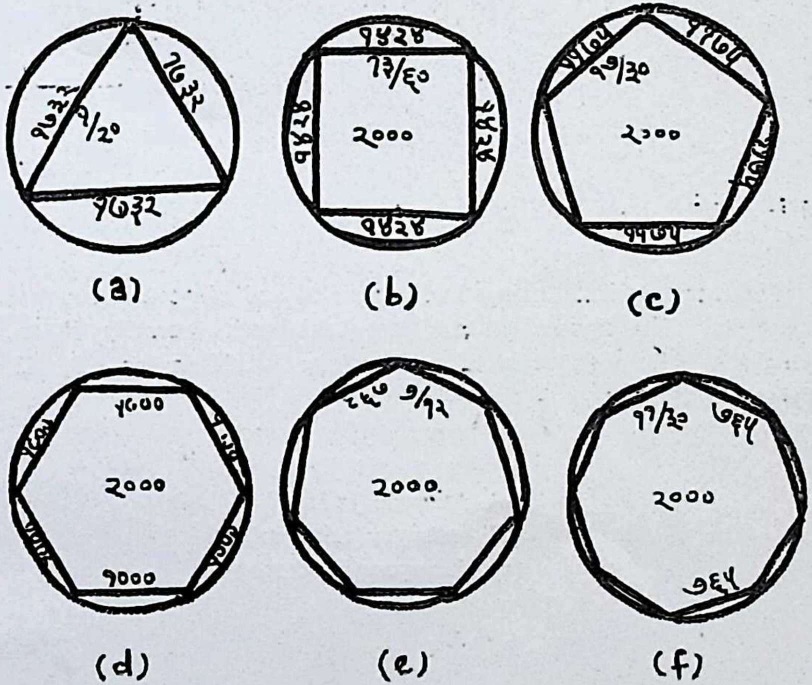

(a)
(b)
(c)
(d)
(e)
(ब)
परिमण्डलद्रोणचिति
प्रउगचिति
उभयतोप्रउगचिति
रथचक्रचिति
उलूखलचिति

Fig. 6

Figure : 7

The concept of 'field' (kshetra) was an ancient one, to be found in the Vedic lore. The incorporation of several forms within the circle was of religious and architectural significance. The measurement of the different members of the geometrical form achieved within the circle was also of practical utility. Illustrated here are :

(a) triangle
(b) square
(c) Pentagon
(d) hexagon
(e) septagon
(f) octagon


१७३२
९/२०
१७३२
१७३२
१४२४
७३/६०
२०००
१४२४
१४२४
१४२४
११७५
९७/३०
११७५
२०००
११७५
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१०००
१०००
२०००
१०००
१०००
१०००
८६७
७/१२
२०००
११/३०
७६५
२०००
७६५

(a) (b) (c)

(d) (e) (f)

Fig. 7

6]

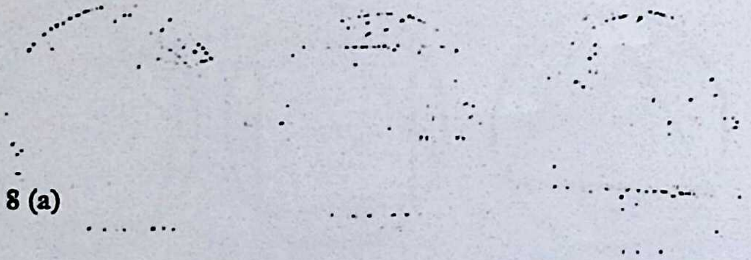
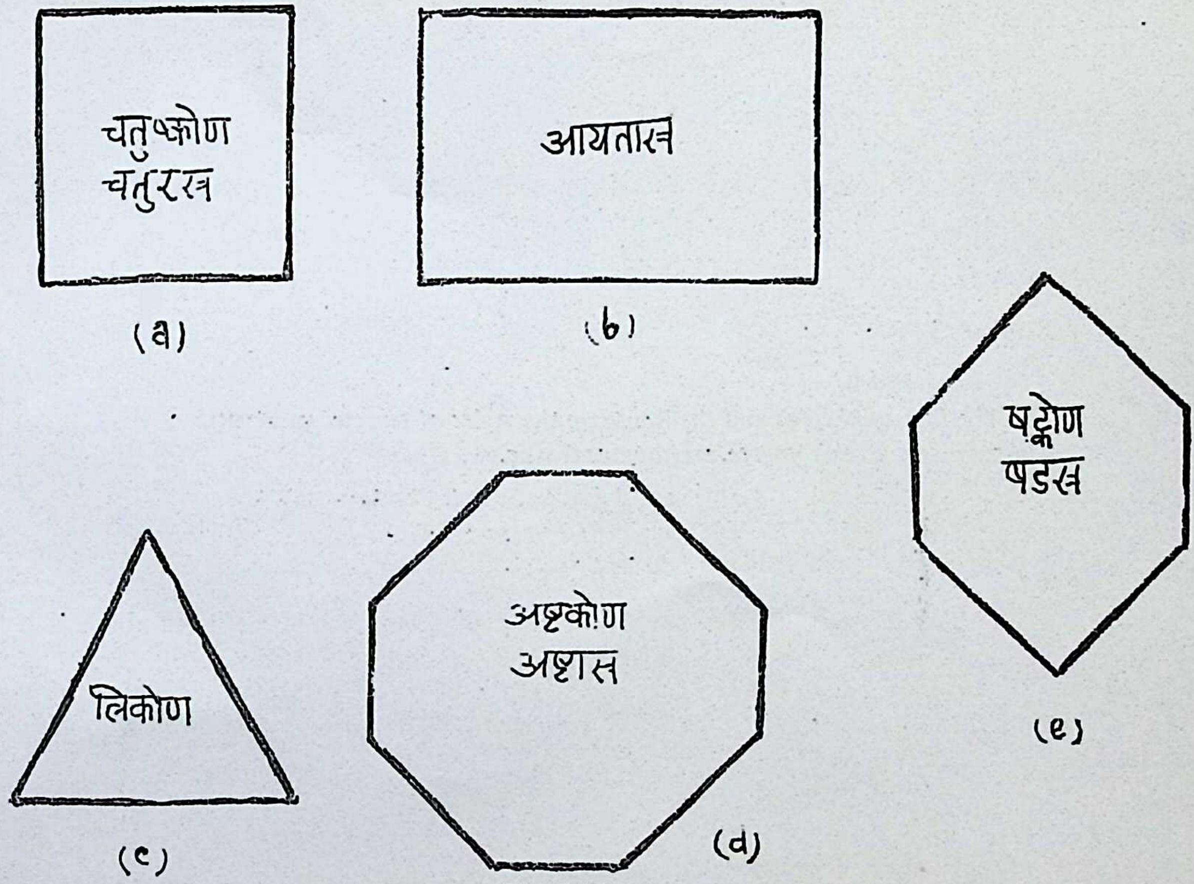


Figure : 8 (a)

The forms stylized during the Epic period and adopted in construction of temples. The figures (a) to (e) are to be seen generally in temples belonging to 'Drāviḍa' style of architecture (cf. *Mānasāra,* 18, 45 and *Mayamata,* 19, 35) :

(a) square (chaturasra)
(b) rectangle (āyatāsra)
(c) triangle (trikoṇa)
(d) octagon (ashṭāsra)
(e) hexagon (shaṭkoṇa)


चतुष्कोण
चतुरस्र
आयतास्र
षट्कोण
षडस्र
त्रिकोण
अष्टकोण
अष्टास्र

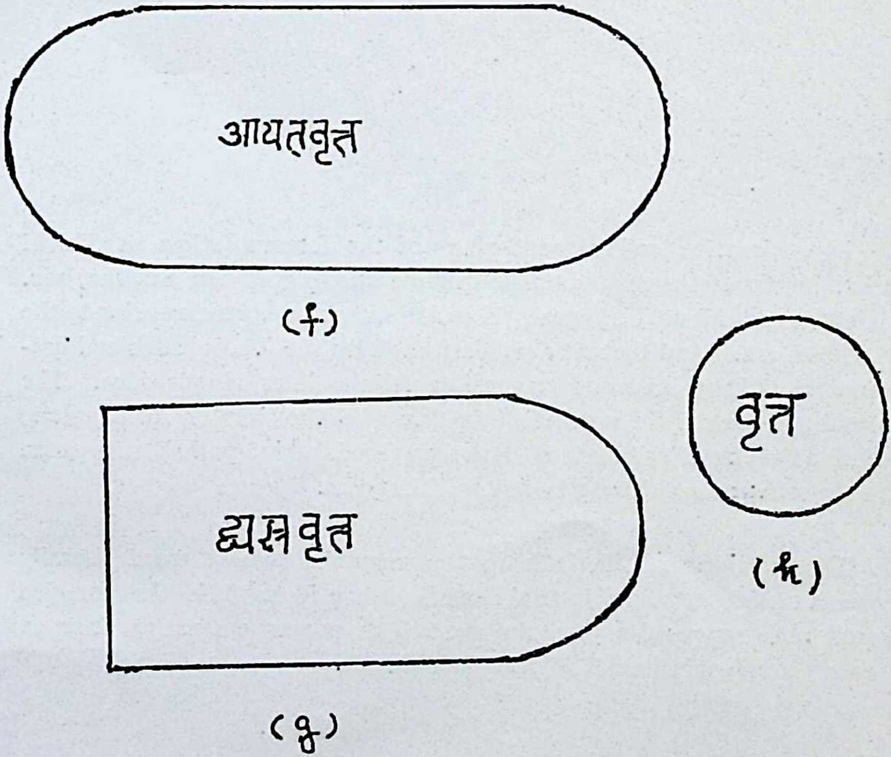
(a) (b) (e) (c) (d)

Fig. 8 (a)

Figure : 8 (b)

The figures (f), (g) and (h) illustrate the styles of temple construction generally seen in the Vesara architectural type.

(f) apsidal at both ends (āyata-vṛtta)
(g) apsidal (dvyasra-vṛtta)
(h) circle (vṛtta)


आयतवृत्त
द्व्यस्रवृत्त
वृत्त

(f)

(g)

(h)

Fig. 8 (b)

Figure : 9

The elevation and ground-plan of the famous stūpa at Sānchī enshrining the relics of the two immediate disciples of the Buddha, viz. Sāriputra and Maudgalyāyana. This dates back to centuries prior to the Christian era. And the stūpa is derived from the Vedic altar and fire-house (agnīdhra), and was responsible for the later temple idea. The ground-plan shows the essential involvement of the circular form (vṛtta), both for the circumambulatory path-way (pradakshiṇā-patha) at the base and the structure at the top known as Harmyaka.

The involvement of circle in the maṇḍala (which word literally means a circle) dates back to the early stūpa idea. It is the fortified sacred area supposed to contain mysterious power emanating from an unseen "womb-substance" (dhātu-garbha).

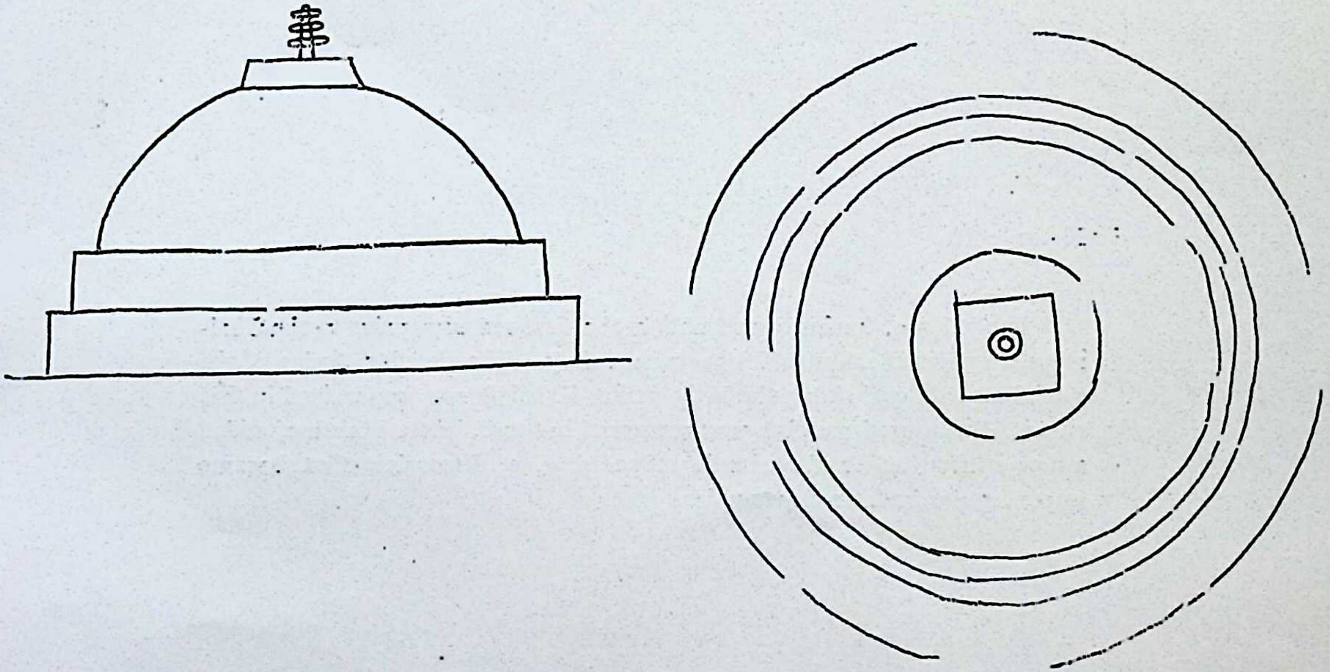


Fig. 9

Figure : 10

The stūpa at Barhut was built in the first century prior to the Christian era when the Śuṅga kings were ruling. The circular design of the burial mound enshrining the body relic (śārīrika) was emphasized in this stūpa. Sculptured panels, now preserved in the Calcutta Museum, added a new dimension to the simple stūpa idea, a dimension that became important in the later-day temples.

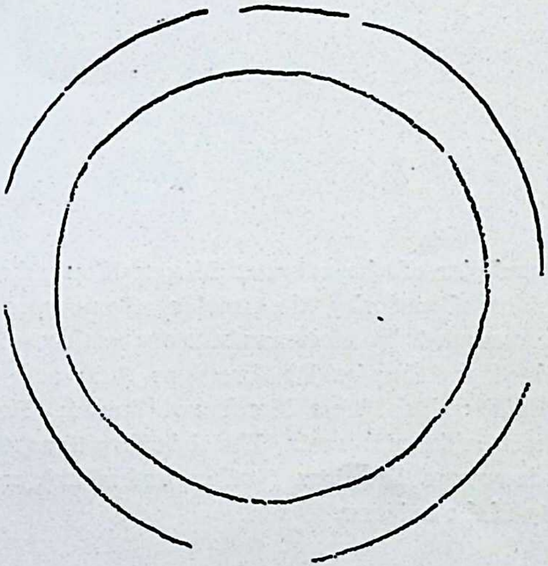


Fig. 10

Figure : 11

The ground-plan of the stūpa at Mirpur-Khas, showing the emergence of the idea of enclosing the circular stūpa proper with a square structure, surrounded by circumambulatory path-ways with corners. This highlighted the four major directions (dik) and the four minor directions (vidik) : East, West, North and South ; North-east, North-west, South-east and South-west. The eight directions, together with the upward and downward directions (ūrdhva and adhas), suggested the idea of the entirety of the universe.

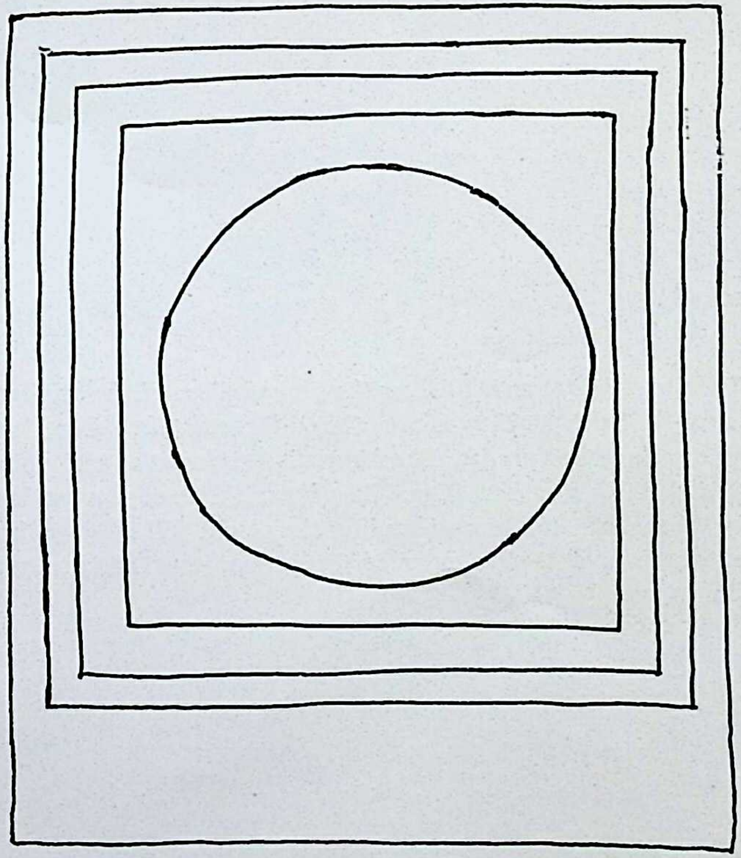
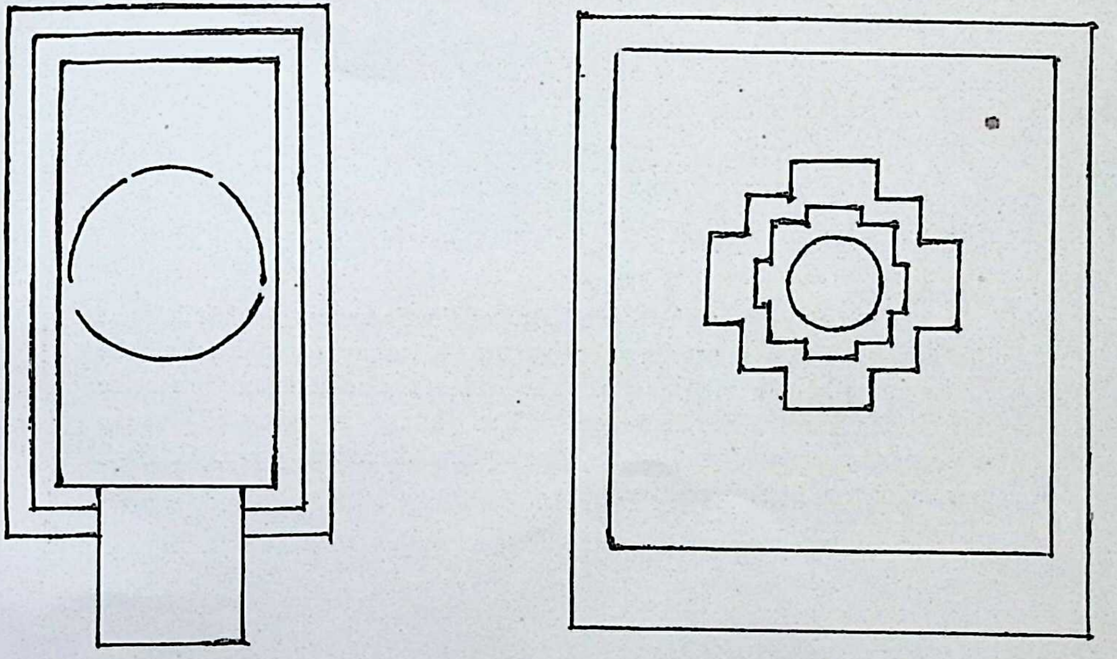


Fig. 11

Figure : 12

The drawings (a) and (b) show the ground-plans of the ancient stūpas at Rawak (Khotan). They show two different styles of enclosing the central circular stūpa proper. The former is a rectangular enclosure with a clearly indicated front pavilion. The latter shows an intersection of two rectangles on a square, comprehending the circle. The figure has eight inner corners and twelve outer corners. The inner corners suggest a circular figure.



(a) (b)

Fig. 12

Figure : 13

The drawing shows the ground-plan of the Somapura Mahāvihāra at Pahāḍpur. It has a square enclosure at the centre as well as at the outer limits of the vihāra site. The form of the building answers to the later 'pañcha-ratha vimāna' type. The pattern is preserved in the successive enclosures, so that the four cardinal directions are emphasized, as well as the entrance portico.

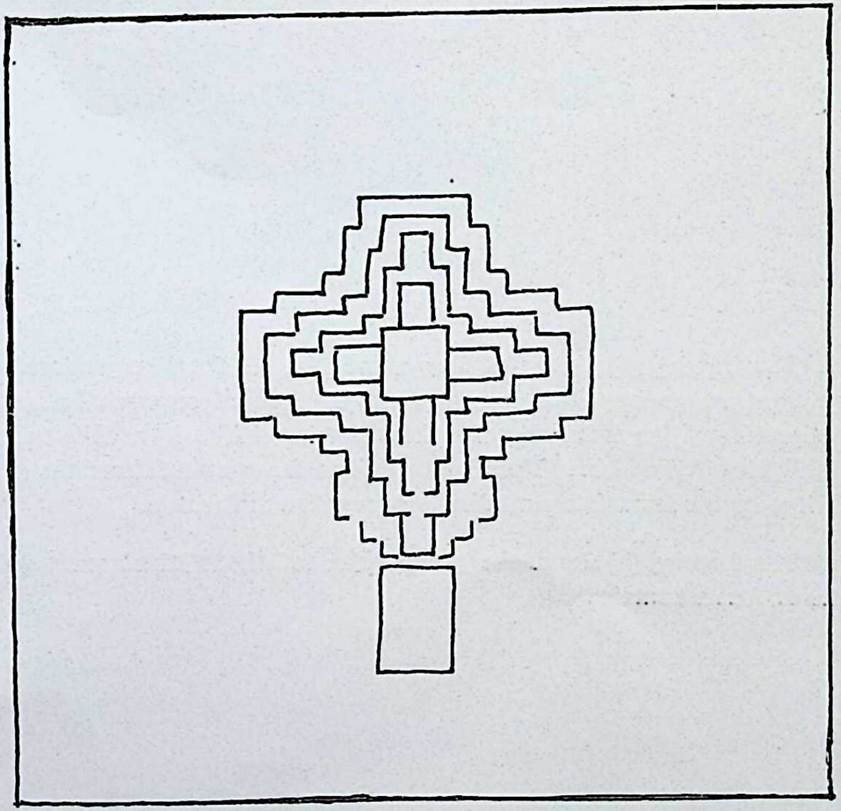
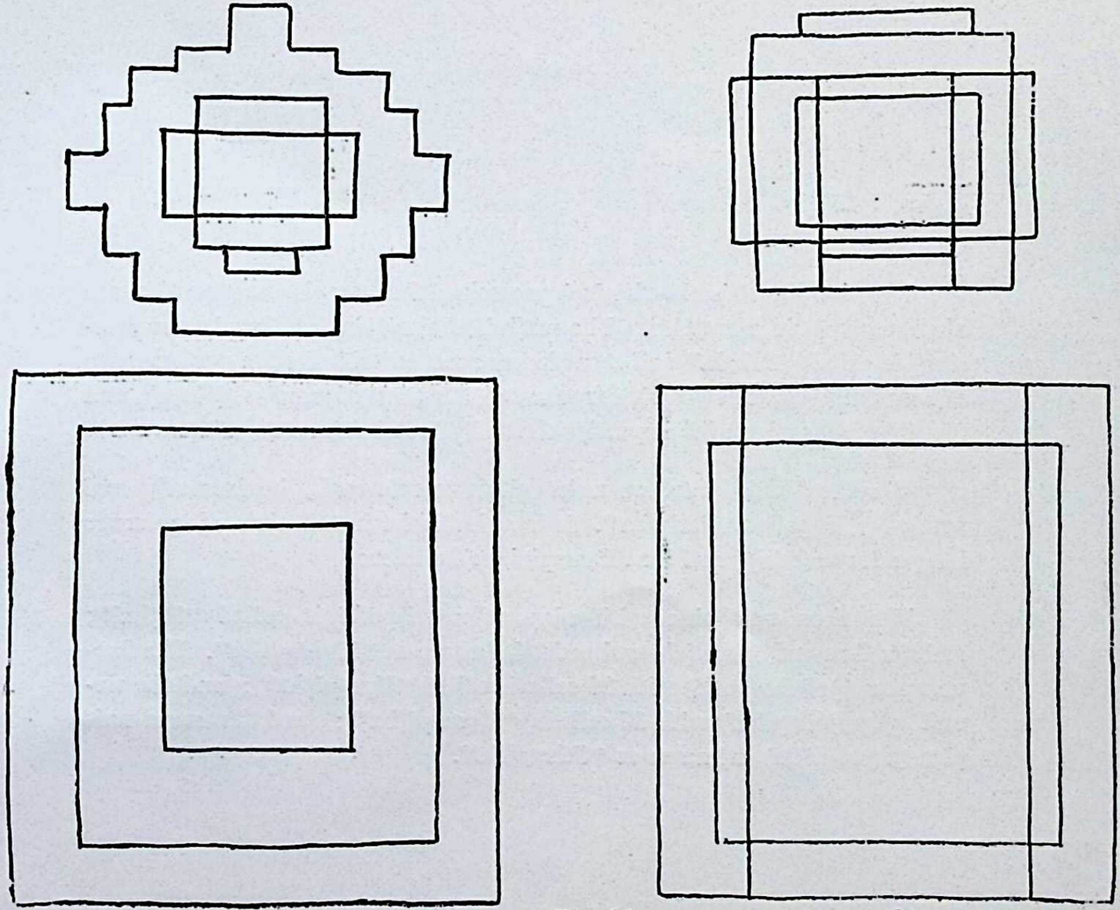


Fig. 13

Figure : 14

The drawing (a) illustrates the ground-plan of the Matsyendranātha temple at Amarakantaka. It shows the stylistic advantages of a square intersecting with a rectangle. The front of the shrine is architecturally highlighted by width. The front pavilion is separated from the main shrine, to accommodate periodical congregation of devotees.

The drawing (b) shows the ground-plan of the Pātāleśvara temple, also at Amarakantaka.



(a) Fig. 14 (b)

Figure : 15 (a)

The site-plans (pada-vinyāsa) prescribed for temple construction are also involved in maṇḍalas. The undivided site (viz. with only one division) is called "Sakala" and regarded as most suitable for the performance of sacrificial rituals (yāga), for the construction of temples (ālaya), and for the preparation of the spot for the daily fire-oblations (agnihotra).

The site divided into two units with two cells each, horizontally and vertically, is called "Pechaka". It is suitable for installation of aniconic images for worship, and for all auspicious functions.

The three-unit plan with nine cells (tri-pada) is called "Pīṭha"; and the four-unit plan (chatushpada) is known as "Mahāpīṭha". The five-unit plan (pañcha-pada) with 25 cells is called "Upa-pīṭha"; and the six-unit plan (shaṭpāda) with 36 cells is "Ugra-pīṭha"; and the seven-unit plan (sapta-pāda) is known as "Sthaṇḍila".

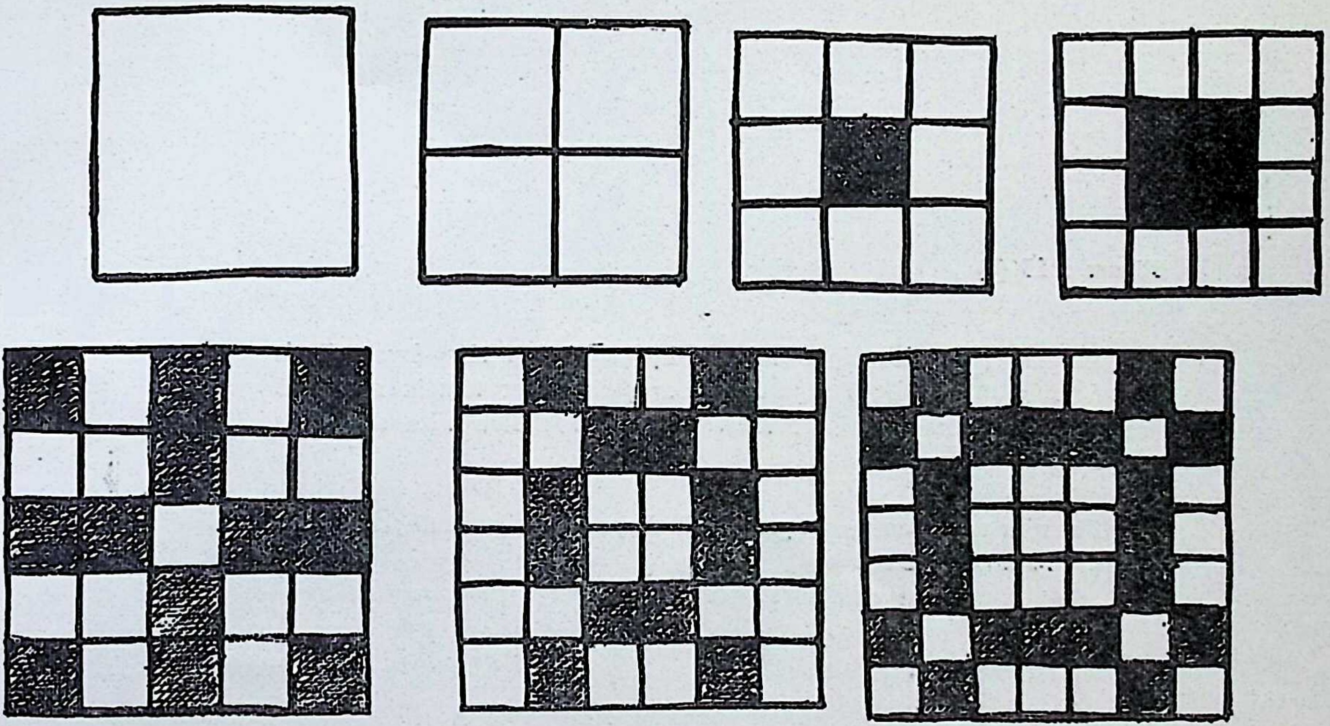


Fig. 15 (a)

Figure : 15 (b)

The site-plan with eight units (ashṭa-pada) has sixty-four cells is called "Maṇḍūka". It is regarded as auspicious for tāntrik rites and temples of feminine spirits because of the association with sixty-four Yoginis.

The nine-unit plan (nava-pada) will have eighty-one cells, and it is called "Parama-śāyika".

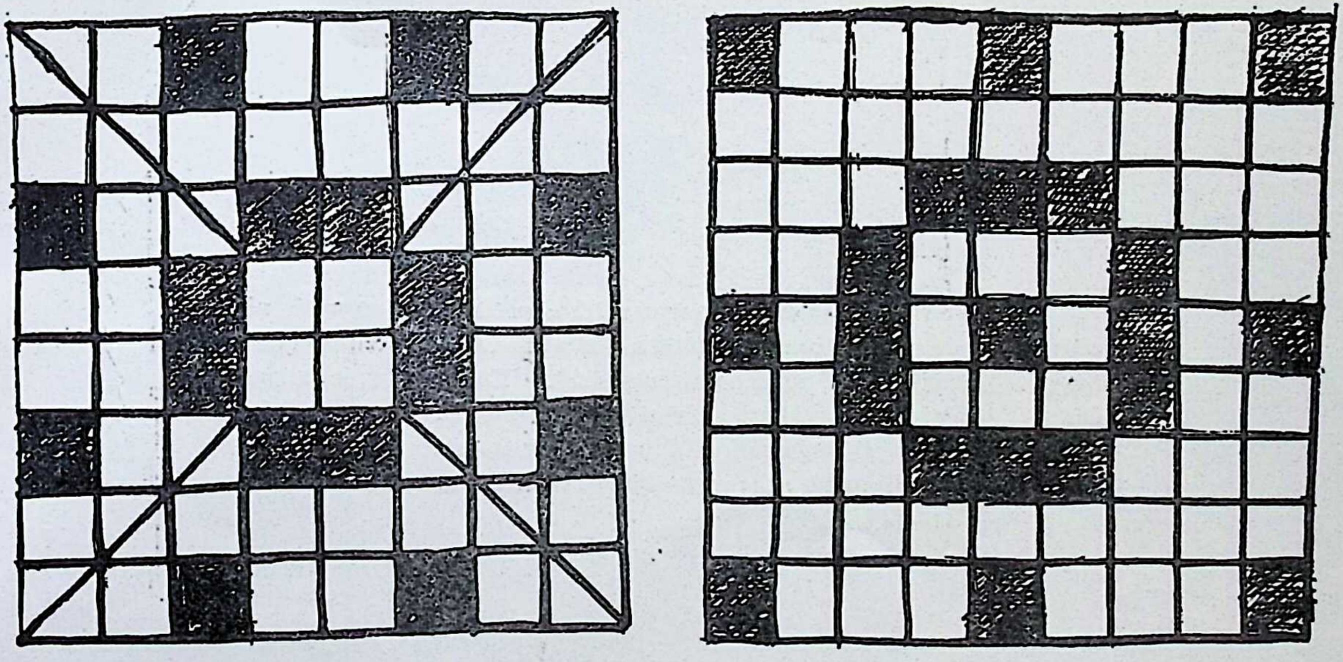


Fig. 15 (b)

Figure: 16

The drawing illustrates the sanctum (the central portion with nine cells forming a square) constructed on a site with twenty-five cells (called koshṭhas), technically known as "Upa-pīṭha". The sanctum is surrounded on all sides with a prākāra, also divided into cells. However, there may be no structural demarcation of the sanctum from the prākāra. The worship ritual will involve the separation of these areas.

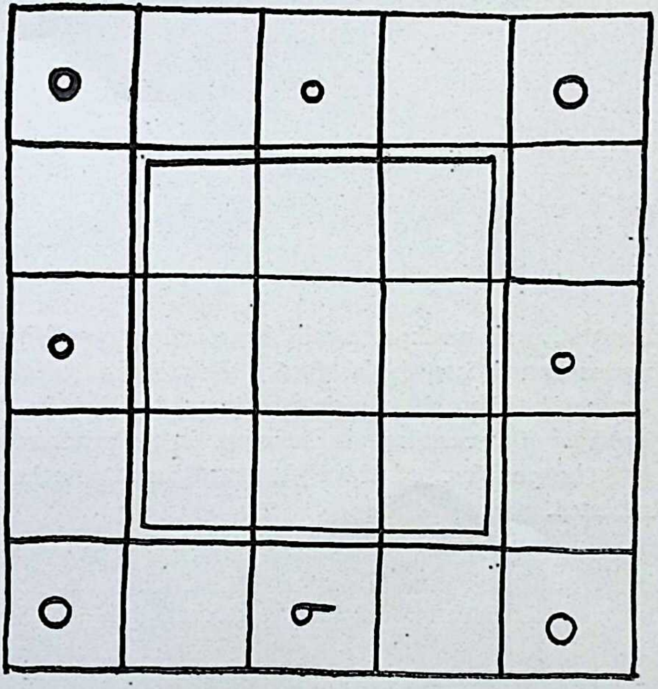


Fig. 16

Figure : 17

The illustration shows the area of the sanctum specifying the spot where the consecrated icon is installed. This is called Brahma sthāna. The sanctum itself will consist of nine cells (nava-koshṭha) in three divisions (tri-pāda). Surrounding the sanctum is the prākāra with cells (koshṭhas). The positions of the eight guardians of directions (dikpāla) are also indicated.

ईश		सूर्य		अग्नि
सोम		ब्रह्मा		यम
वायु		वरुण		निर्ऋति

9]

Fig. 17

Figure : 18

The plan showing the 'brahma-sthāna', the enclosures (āvaraṇa) and the surrounding wall (prākāra) of the later temples. Note that the sanctum was not always in the central portion of the temples.

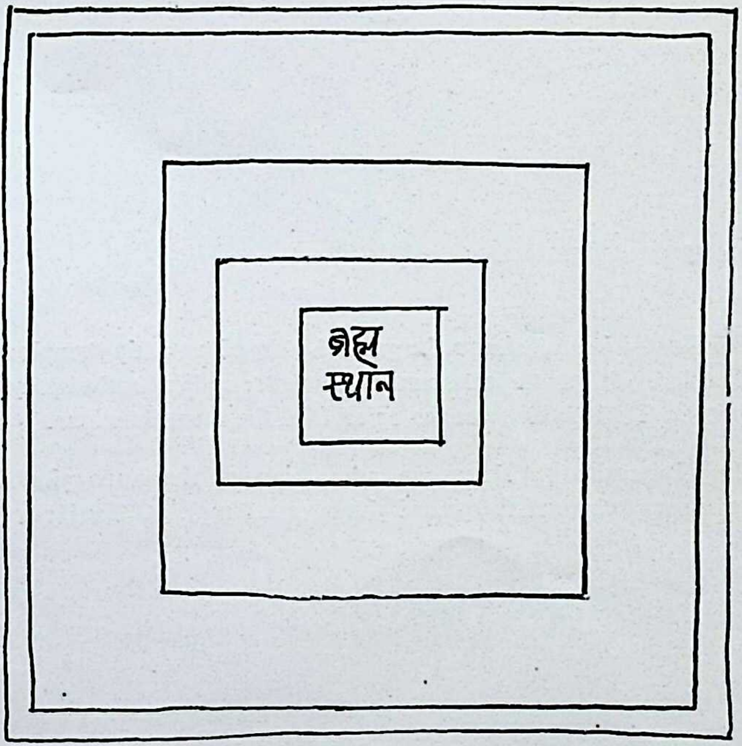


Fig. 18

Figure : 19

The illustration (a) shows the ground-plan of an early temple of the Gupta period. It has the sanctum in the centre and an ambulatory passage alround. There is an entrance on each of the four directions.

The illustration (b) shows an adaptation of the same plan in the vimāna superstucture of the great Bṛhadīśvara temple at Tanjāvūr (Tamil Nadu)

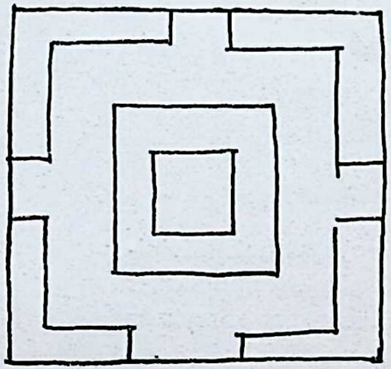


Fig. 19 (a)

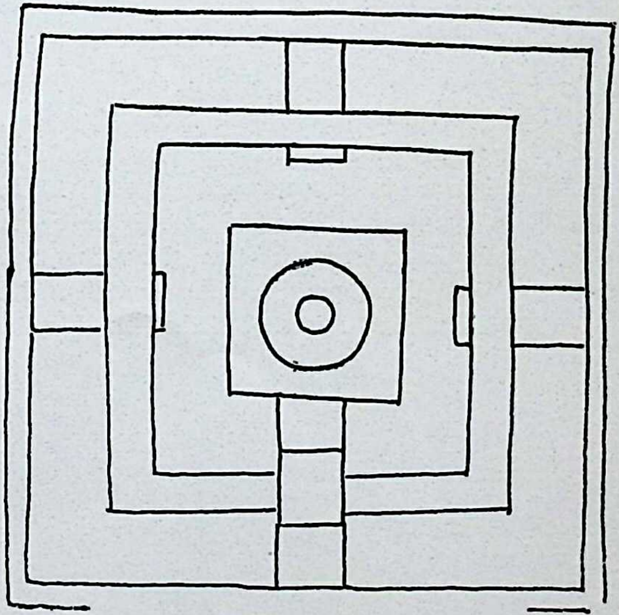


Fig. 19 (b)

Figure : 20

The Vāstu-maṇḍala with eighty-one cells (koshṭhas), with the divinities assigned to the cells. The central-most area (with nine cells), which is square in shape, is the 'brahma-sthāna'. The four main directions (East, South, West and North) have each a rectangle with six cells, and the four corner-directions (Nort-East, South-East, South-West and North-West) have squares (with four cells). The maṇḍala is square in shape and has nine cells on each of the four sides.

Fig. 20

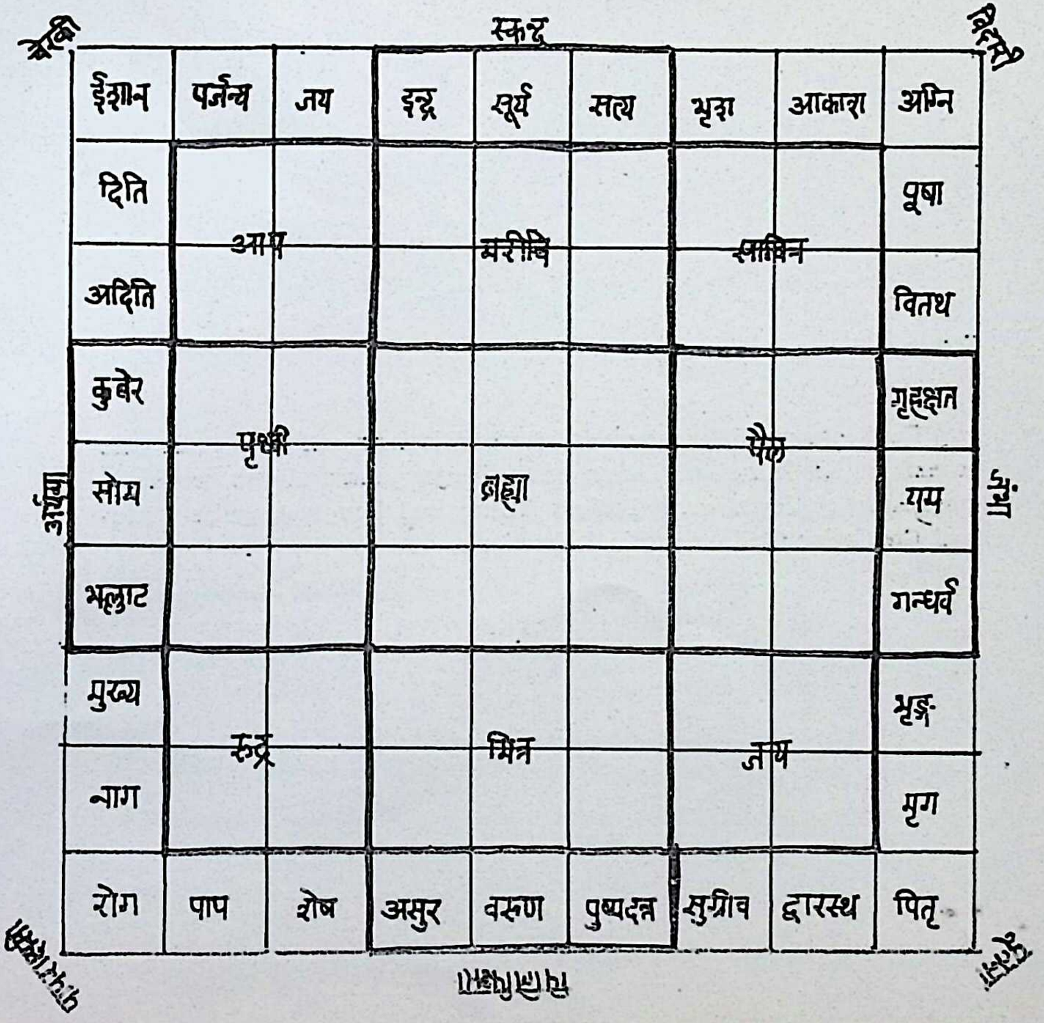

चरकी
स्कन्द
विदारी
ईशान
पर्जन्य
जय
इन्द्र
सूर्य
सत्य
भृश
आकाश
अग्नि
दिति
पूषा
आप
मरीचि
सावित्र
अदिति
वितथ
कुबेर
गृहक्षत
पृथ्वी
पैल
अर्यमा
सोम
ब्रह्मा
यम
जंभः
भल्लाट
गन्धर्व
मुख्य
भृङ्ग
रुद्र
मित्र
जय
नाग
मृग
रोग
पाप
शोष
असुर
वरुण
पुष्पदन्त
सुग्रीव
द्वारस्थ
पितृ
पापराक्षसी
पिलिपिच्छ
पूतना

Figure : 21

The Vāstu-maṇḍala, square (chaturasra) in form and having ten cells on each of the four sides, has an internal arrangement of two rectangles intersecting, giving a square Brahma-sthāna, and four rectangular vāstu-koshṭhas facing the four cardinal directions.

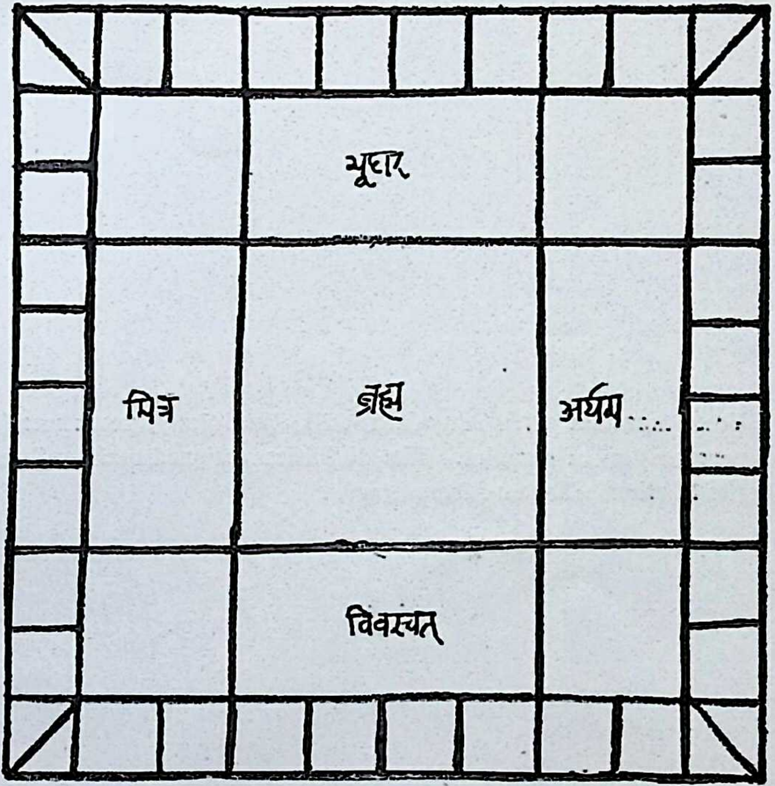

भूधर
मित्र
ब्रह्म
अर्यम
विवस्वत्

Fig. 21

Figure : 22

The Vāstu-maṇḍala with sixty-four cells, (koshṭhas), recommended for the construction of temples. The divinities assigned to the cells are according to Madhva's *Tantra-sārasaṁgraha.*

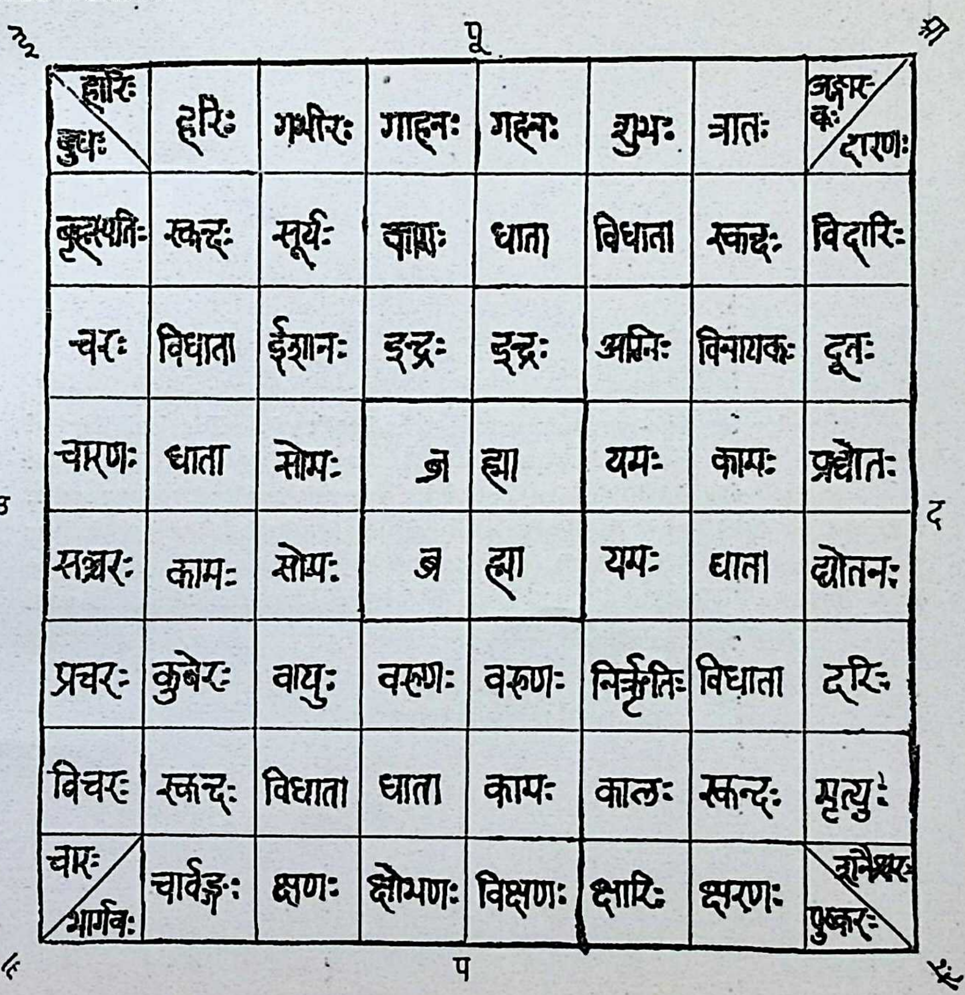


Fig. 22

हारिः बुधः	हरिः	गभीरः	गाहनः	गहनः	शुभः	त्रातः	अङ्गारकः दारणः
बृहस्पतिः	स्कन्दः	सूर्यः	चापः	धाता	विधाता	स्कन्दः	विदारिः
चरः	विधाता	ईशानः	इन्द्रः	इन्द्रः	अग्निः	विनायकः	दूतः
चारणः	धाता	सोमः	ब्र	ह्मा	यमः	कामः	प्रद्योतः
सञ्चरः	कामः	सोमः	ब्र	ह्मा	यमः	धाता	द्योतनः
प्रचरः	कुबेरः	वायुः	वरुणः	वरुणः	निर्ऋतिः	विधाता	दरिः
विचरः	स्कन्दः	विधाता	धाता	कामः	कालः	स्कन्दः	मृत्युः
चारः भार्गवः	चार्वङ्गः	क्षणः	क्षोभणः	विक्षणः	क्षारिः	क्षरणः	शनैश्चरः पुष्करः

Figure : 23

Site-plan for one-sanctum temple (eka-berālaya). For building of temples, the square site (chaturasra-vāstu) is preferably divided into eight cells on each side (koshṭhāsṭaka), so that there are in all sixty-four cells. According to *Mayamata*, the central portion (brahma-sthāna) with four cells on each side (chatushka), thus comprising of sixteen cells, should be the sanctum. The area alround is called 'alinda' (corridor) which is used as an ambulatory passage (pradikshaṇā-patha)

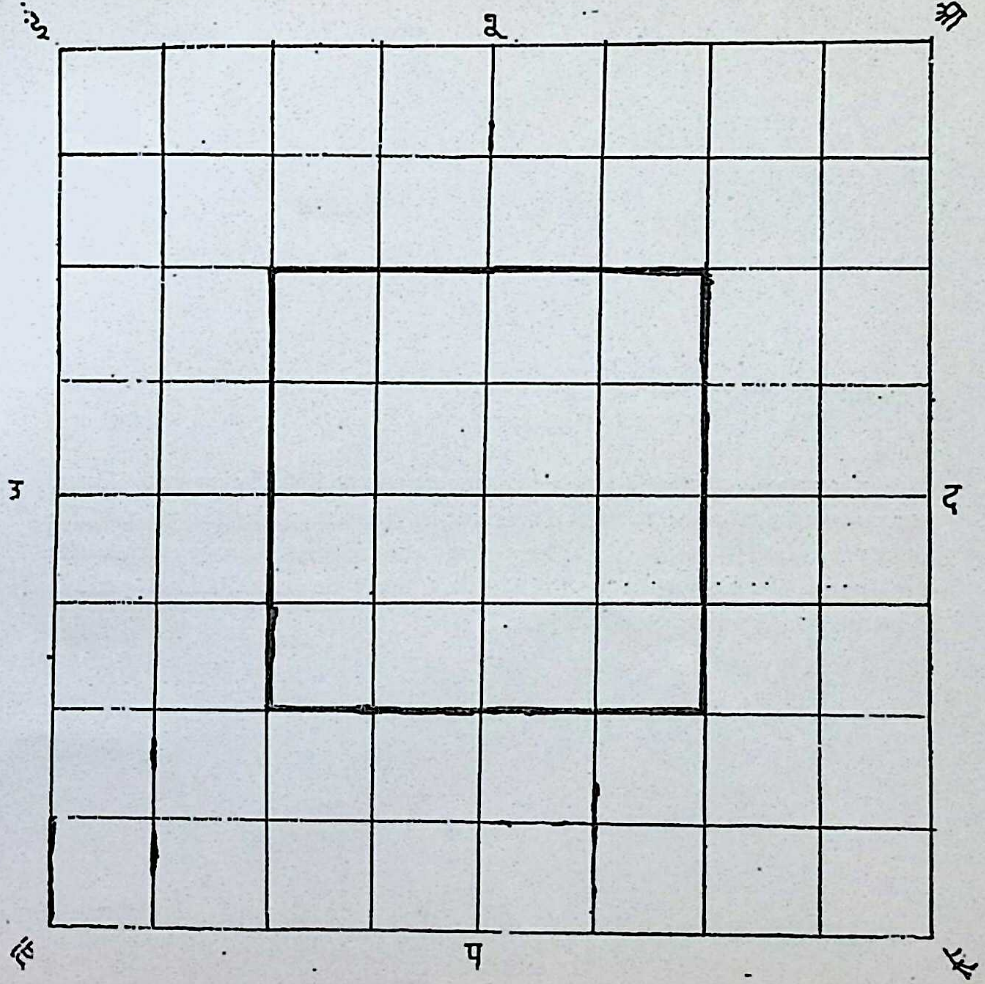


Fig. 23

Figure : 24

The arrangement of a single sanctum at one end of the square Vāstu, for accommodating pavilions in front, is illustrated in the plan. The sanctum in this case, is without the ambulatory passage round the sanctum. The early cave-temples of the Chāḷukyan and Pallava periods are found to have adopted this plan.

Fig. 24

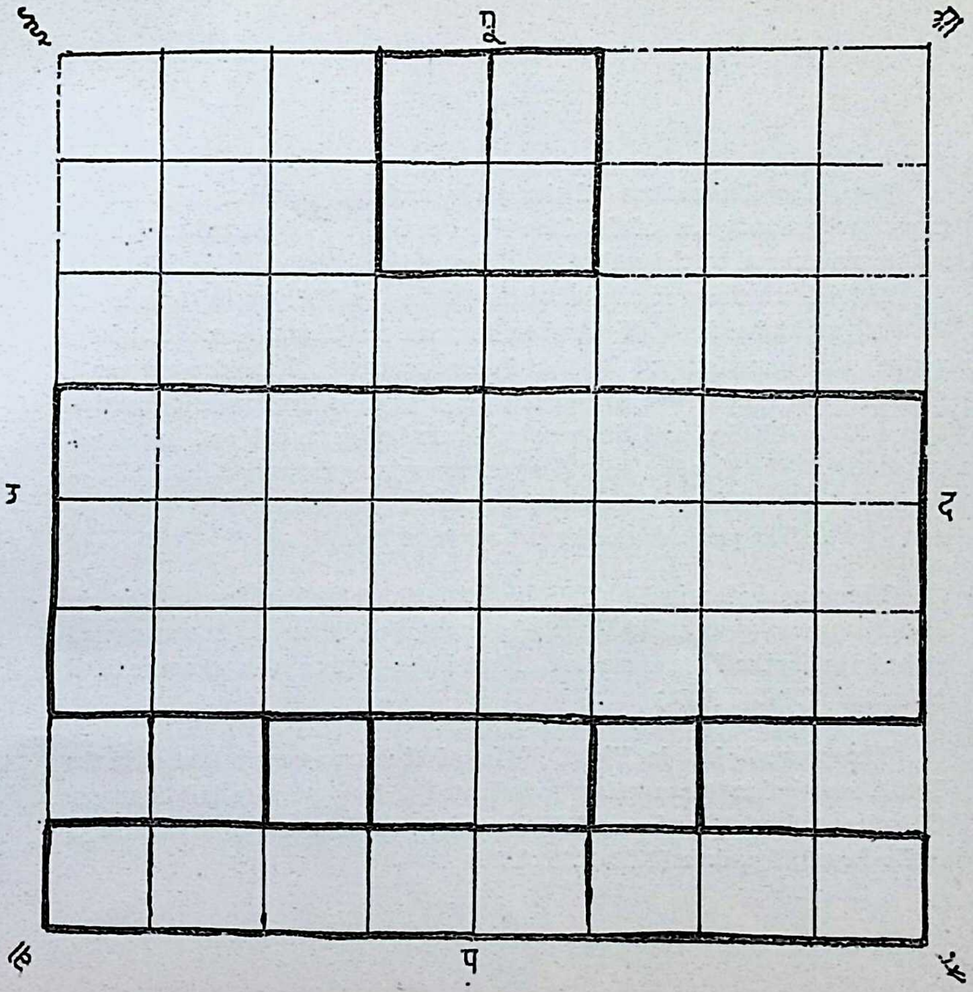
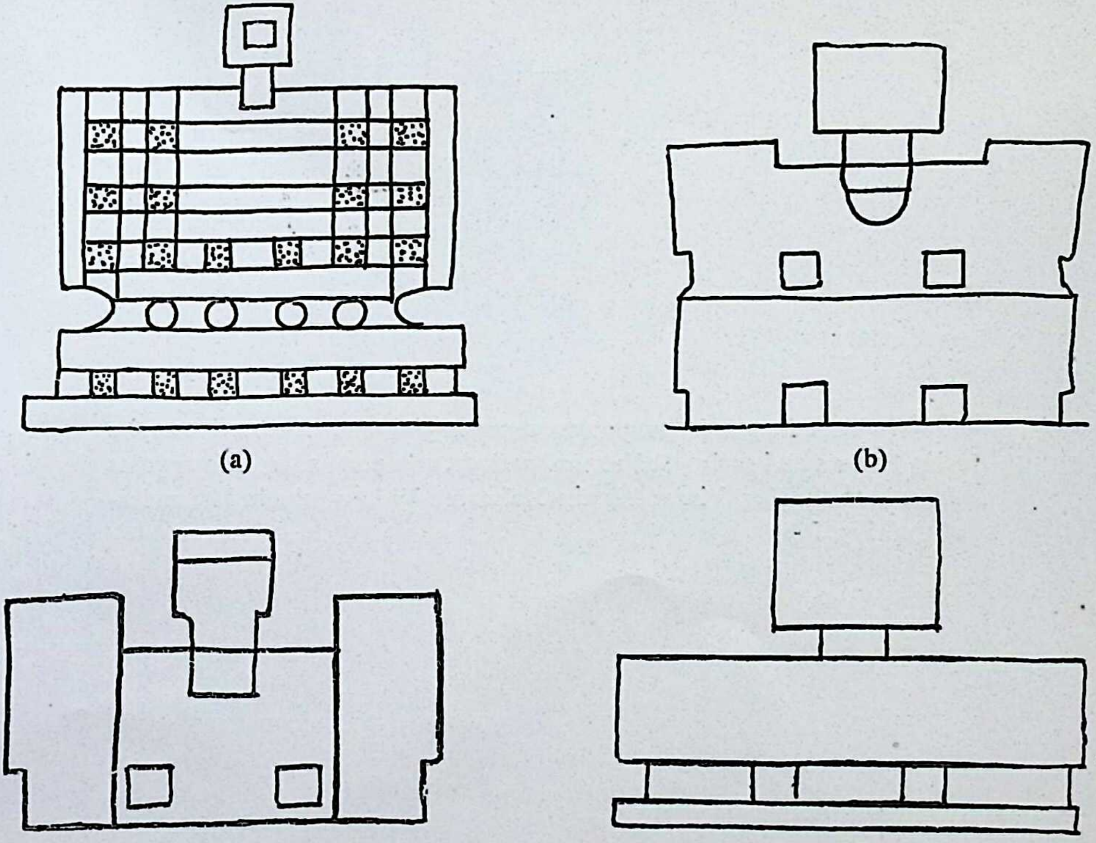


Figure : 25

These are illustrations of the early rock-cut temples. Fig. 25(a) shows the ground-plan of the Cave No. 3 at Badami, dedicated to Vishṇu and commissioned by the early Chāḷukyan emperor Maṅgaḷīśa in 578 A.D. Fig. 25(b) shows the ground plan of the 'Mahendra-Vishṇugṛha' temple to Vishṇu, in Mahendra-vāḍi (Arakonam taluk in North Arcot district), which was commissioned by the Pallava monarch, Narendra-varman I (580-630 A.D.) The name of the architect is given in the Sanskrit inscription as Guṇa-bhadra, and the temple is described as 'solid and spacious' ('mahati'). The plan has an oblong sanctum, a narrow vestibule ('śukanāsa'), a half-pavilion (ardha-maṇḍapa) and an entrance porch (mukha-maṇḍapa). The plan adopted by it is given in Fig. 26.

The ground-plan in Fig. 25(c) is of the celebrated Varāha-maṇḍapa in Māmallapuram (now called Mahabalipuram), near Madras. It was caused to be hewn by the Pallava monarch Narasiṁha-varman who was surnamed Māmalla' (630-668 A.D.)

The ground-plan in Fig. 25(d) is of the cave-temple (called in the Tamil inscription 'deva-kulam') dedicated to Vasanteśvara in Vaḷḷam (in Chingleput district, and near Kāñchīpuram). It is ascribed to the reign of Ko-Peruṅjiṅga-deva (1179-1180 A.D.)



(a) (b)

(c) (d)

Fig. 25

Figure : 26

The plan adopted by numerous cave-temples and structural temples during Pallava and early Chāḷukyan periods. In particular, this appears to have been the plan followed in the Mahendra-Vishṇu-gṛha in Mahendra-vāḍi (cf. Fig. 23)

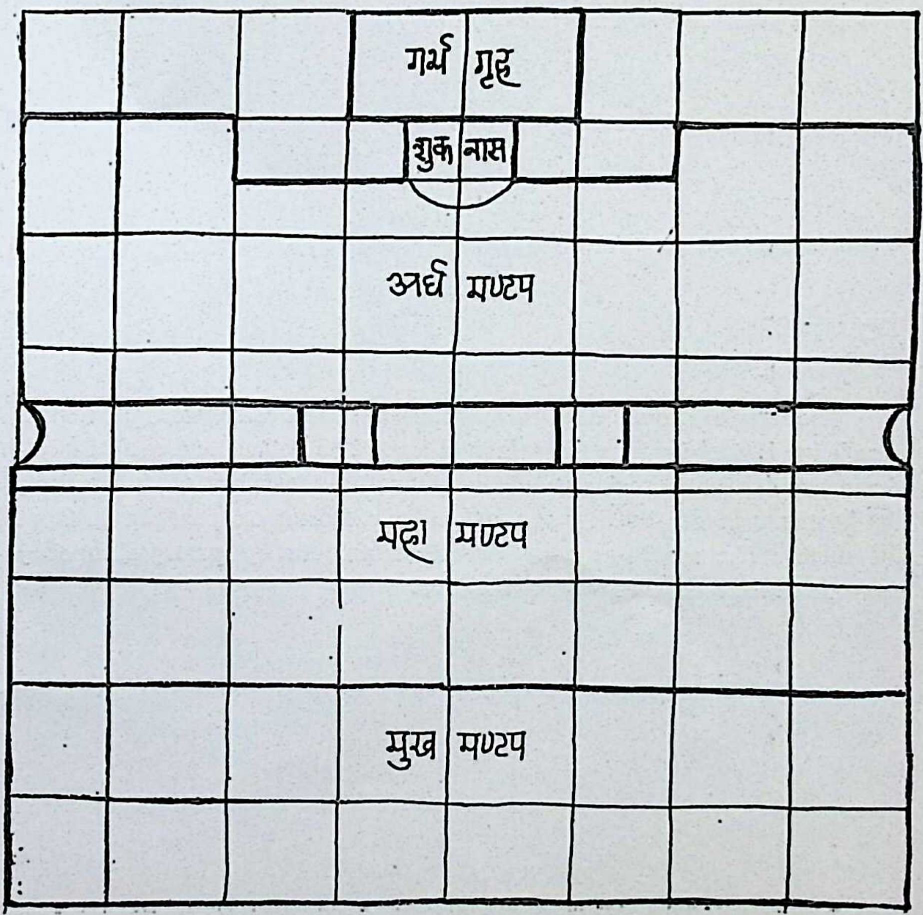

गर्भ गृह
शुक नास
अर्ध मण्टप
महा मण्टप
मुख मण्टप

Fig. 26

Figure : 27

The temple known as 'Trikūṭāchala' has three sanctums, the central one being looked upon as the principal one. The Pallava and early Chāḷukyan temples (both rock-cut and structural) were dedicated to Brahmā, Vishṇu and Śiva. But it was usual to have a common pavilion in front of them. The sanctums were devoid of ambulatory passages, for they were hewn into the rear wall of the cave.

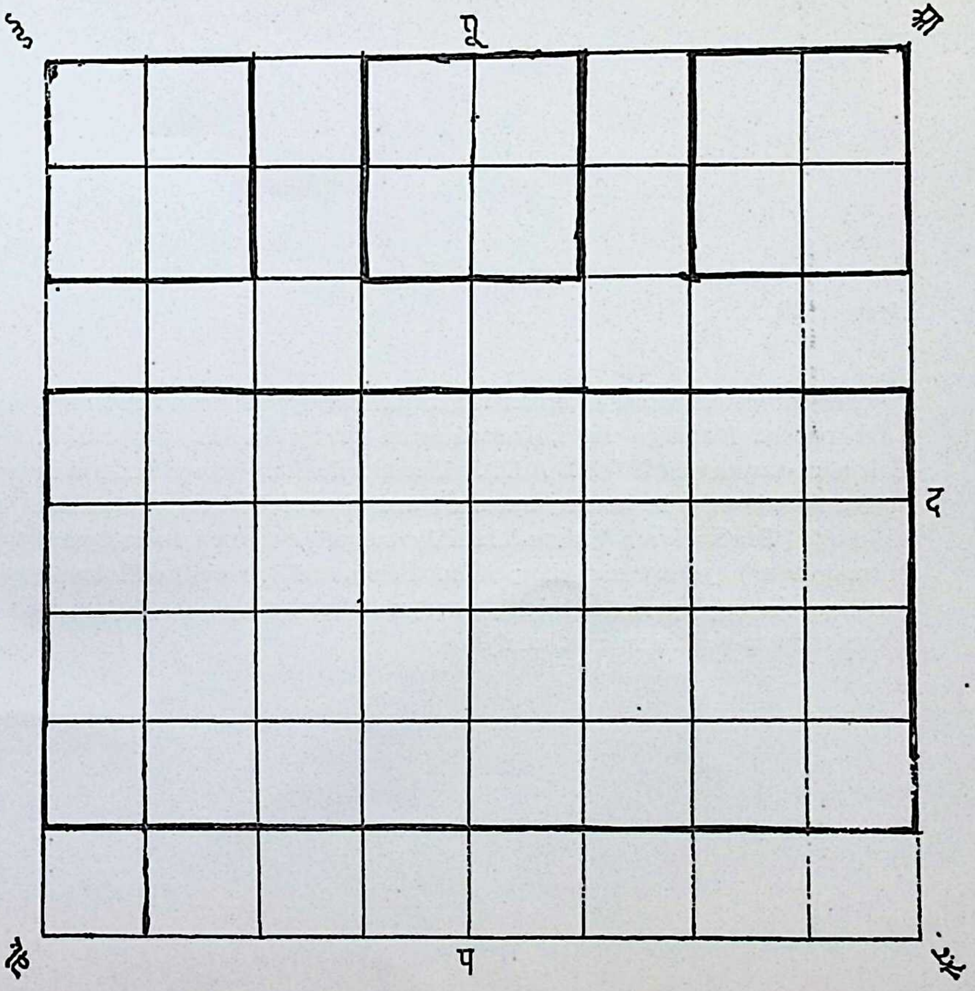


Fig. 27

Figure : 28

The earliest illustration of the 'Trikūṭāchala' type of rock-cut temple is the one at Mandaga-paṭṭu, caused to be cut by the Pallava monarch, Mahendra-varman I (580-630 A.D.). The temple has been described in the Sanskrit inscription as an "āyatana' dedicated to Brahmā, Īśvara and Vishṇu" ('Brahmeśvara-Vishṇu-lakshitāyatanam'), "caused to be made" ('nirmāpitam') by the "marvellous minded monarch" ('vichitra-chittena') "without the employment of bricks, wood, metal or lime-plaster," ('anishṭakam adrumam aloham asudham').

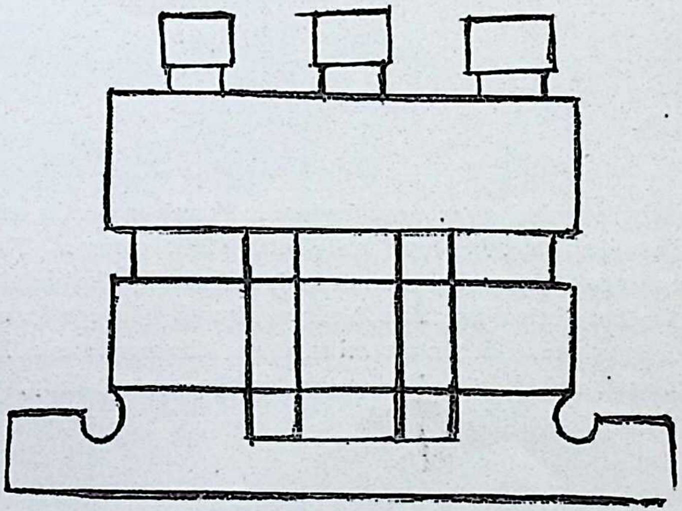


Fig. 28

Figure : 29

The temple with five sanctums (square in shape) one in the centre (the principal one) and the other four located at the four corners. The temple is known as 'pañchāyatana' ('five-shrine') and usually the divinities installed in the five shrines are Śiva, Vishṇu, Durgā, Gaṇapati and Sūrya. If Śiva's liṅgam occupies the central sanctum, the temple is called 'Śiva-pañchāyatana', and if it is Vishṇu that is the central deity, 'Vishṇu-pañchāyatana'

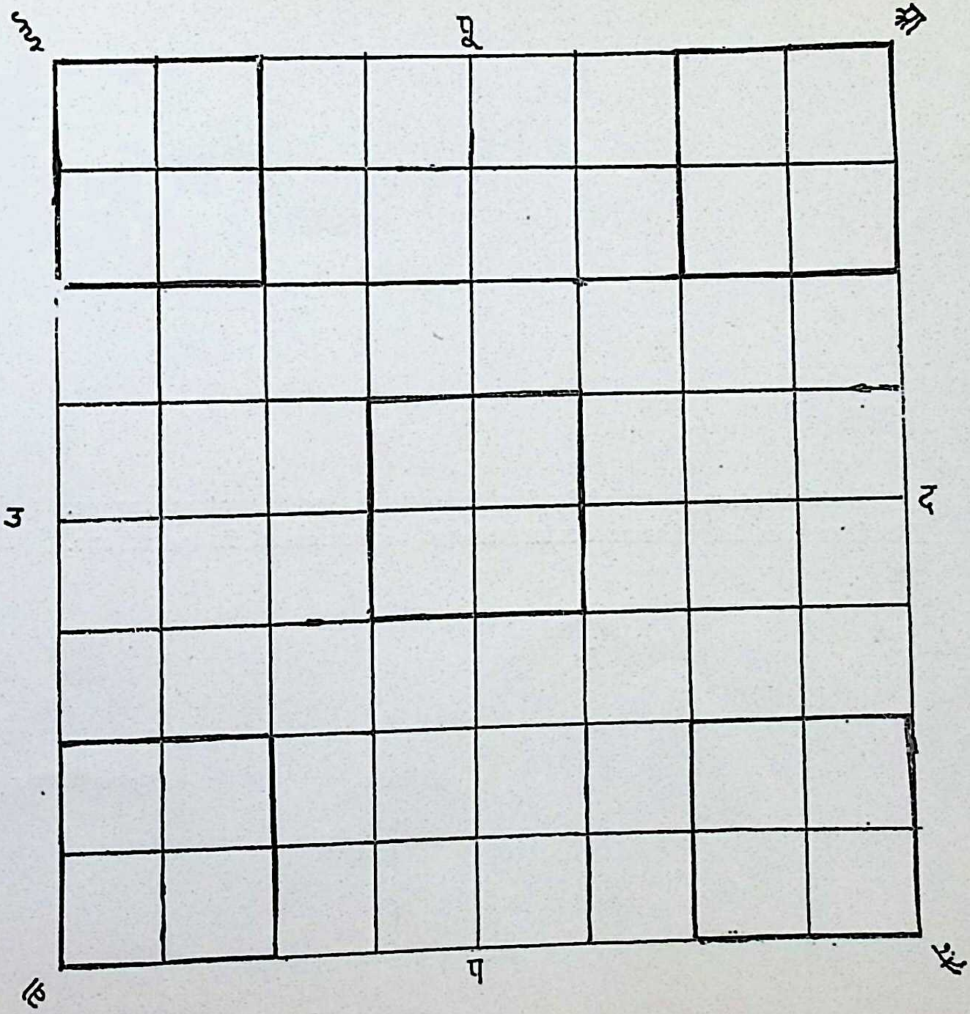


Fig. 29

Figure : 30

Another arrangement of the five shrines in a pañchāyatana temple. The four subsidiary shrines are located on the four sides of the central one.

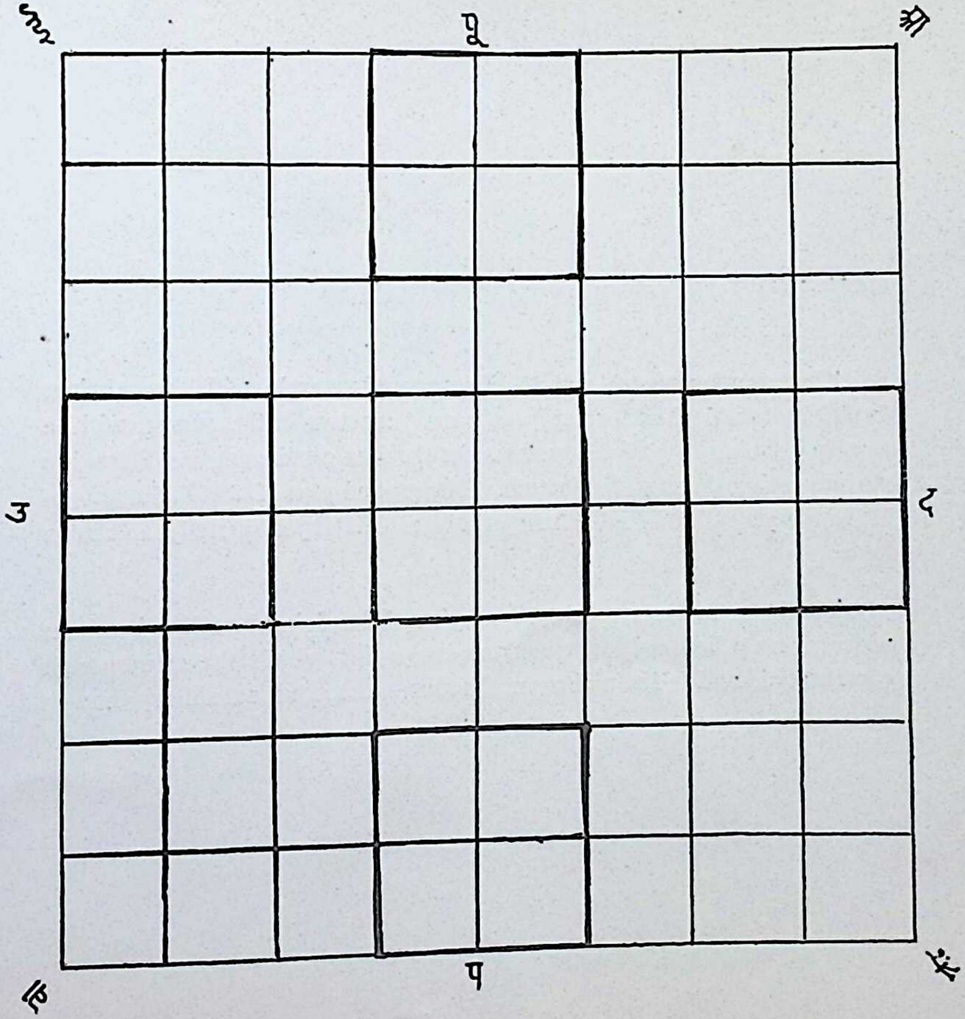
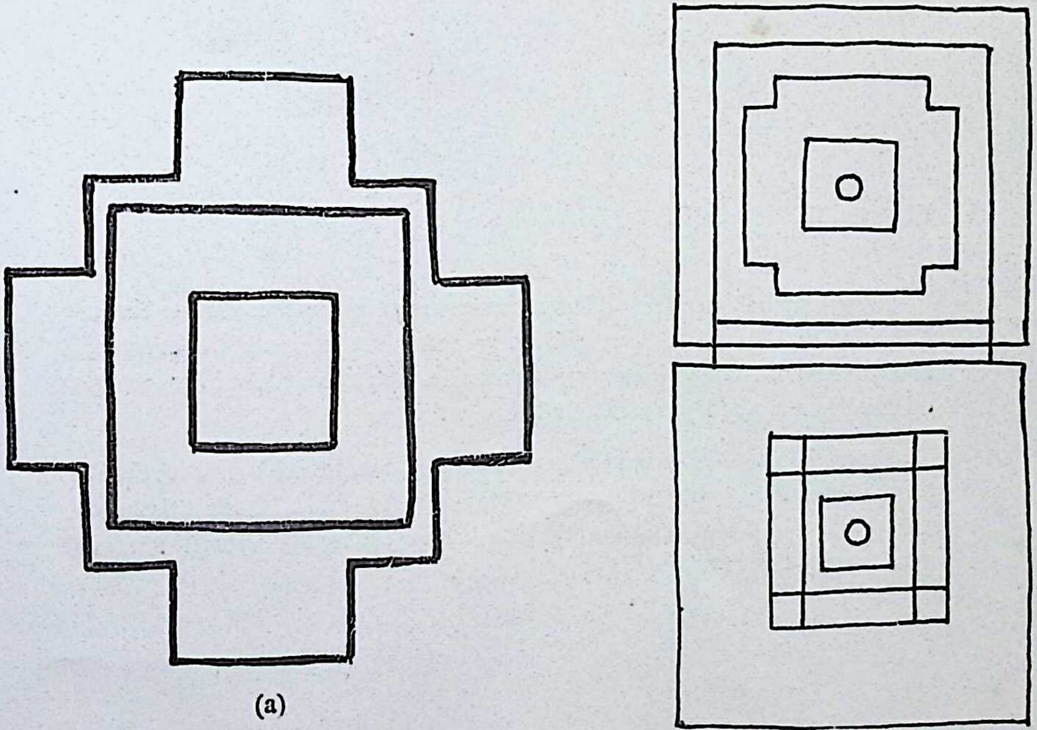


Fig. 30

Figure : 31

The two figures (a) and (b) illustrate the temple with five shrines (pañchāyatana). The former has the main sanctum in the center with a circumambulatory path alround it. In the four cardinal points there are shrines facing the central sanctum. The ground-plan of the Pañchaliṅgeśvara temple at Hūli (built during the later Chāḷukyan period) is shown here.

The latter is the typical ground-plan of the Jaina basadi where the main sanctum houses the tīrthaṅkara image for which the structure is consecrated, and in the niches on the four sides four subsidiary images are placed.



(a) (b)

Fig. 31

Figure : 32

The figure illustrates a different arrangement of the five shrines in a Pañchāyatana temple. Four subsidiary shrines are located at the corners, and each of them may have a circumambulatory pathway. And the group of five has a common circumambulatory pathway.

Here is a typical ground-plan of the Jaina basadis with five tīrthaṅkara shrines. The five shrines are generally for Ādi-nātha (the first tīrthaṅkara), Śānti-nātha (the sixteenth), Nemi-nātha (the twenty-second), Pārśva (the twenty-third) and Mahāvīra (the last).

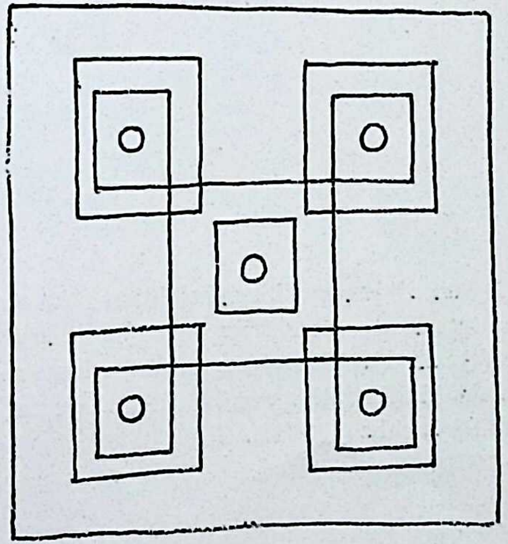
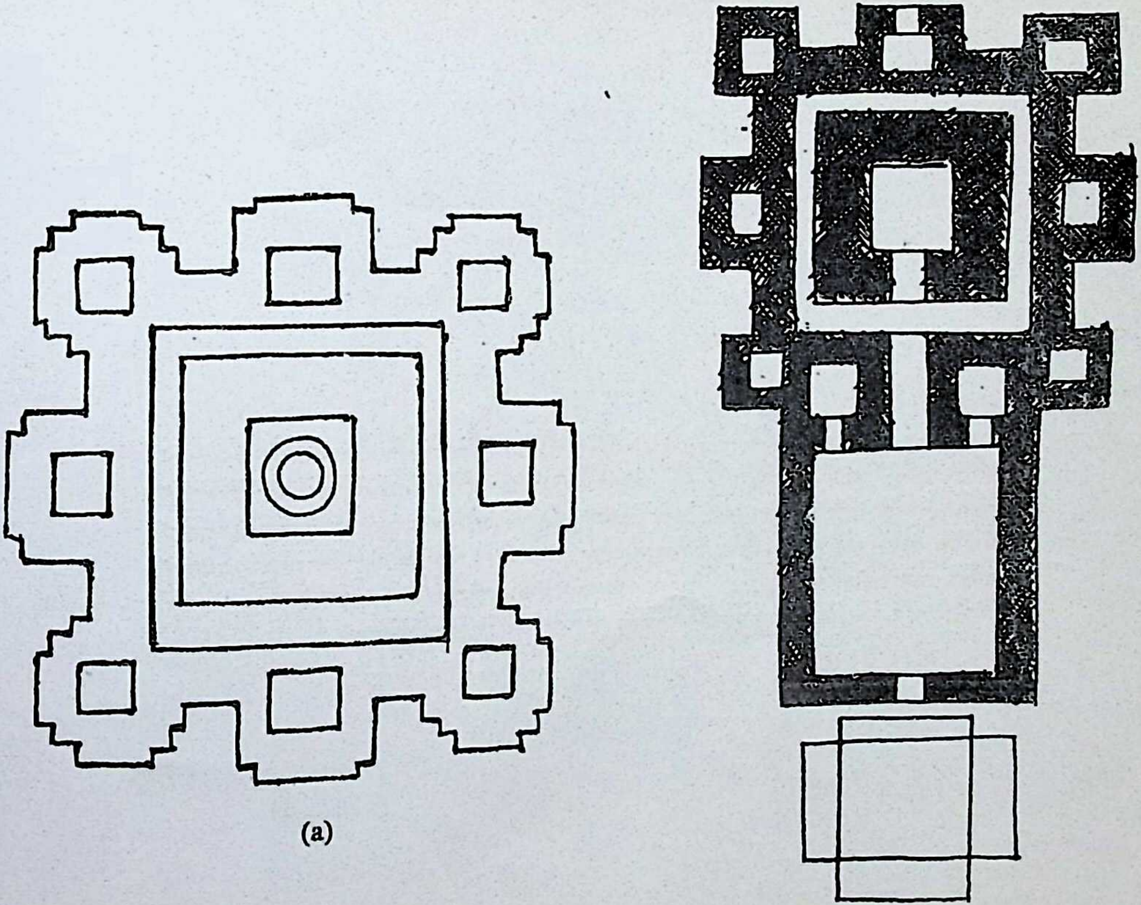


Fig. 32

Figure : 33

The ground-plans of temples with eight shrines, the main one being located in the centre and the other seven arranged around it, are illustrated in figures (a) and (b). One of the most excellent examples is the main shrine of the Kailāsanātha temple at Kāñchipuram, built by the Pallava monarch Rājasiṁha (700-728 A.D.)



(a)

(b)

Fig. 33

Figure : 34

The Vāstu-maṇḍala of sixty-four cells (according to Madhva's *Tantra-sāra-saṁgraha*) with the Brahma-sthāna in the centre (four cells), surrounded by the guardians of directions (two cells for each of the major directions, East, South, West and North, and one each for the minor directions, South-East, South-West, North-West and North-East). The four one-celled enclosures at the corners are assigned to Skanda.

Fig. 34

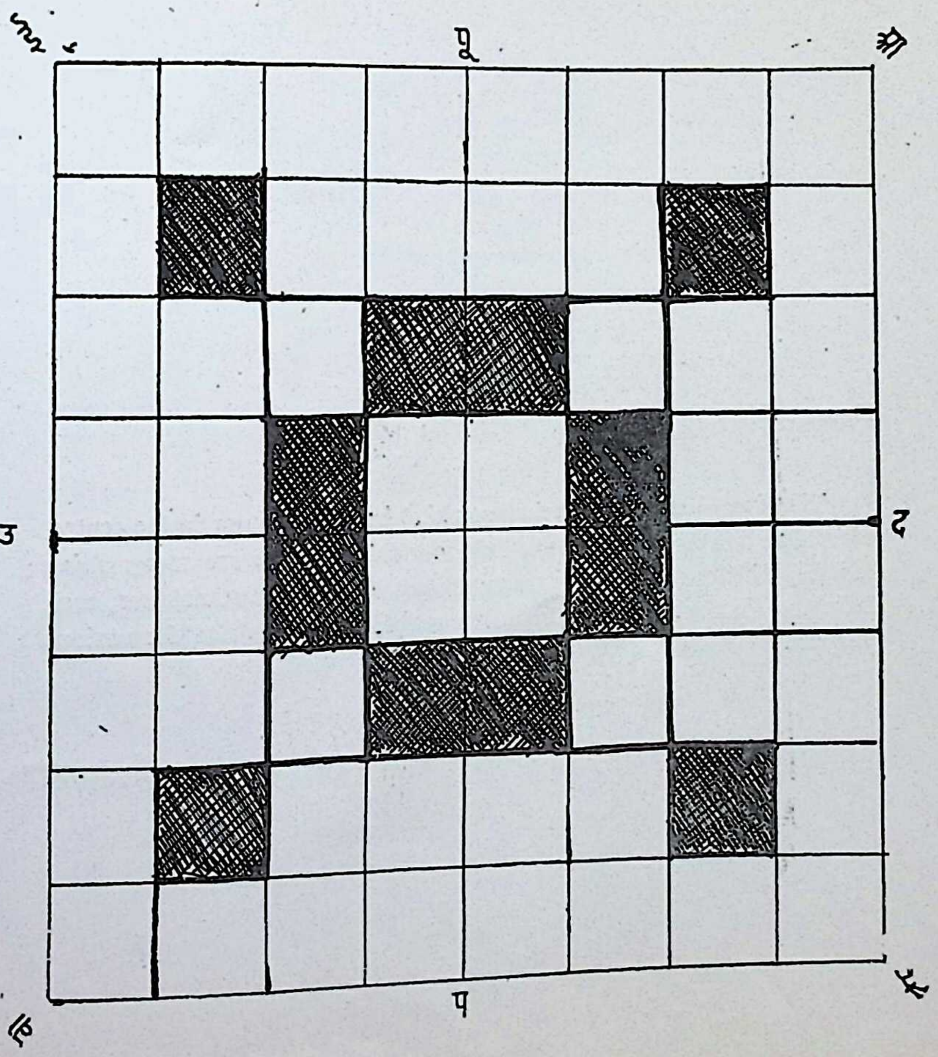


Figure : 35

The 'four-faced temple' (chaturmukha) has the sanctum in the centre, which can be approached from all the four sides. There are many Jaina basadis, which contain in the sanctum images of four tīrthaṅkaras, each facing a direction. This is also a frequent plan for 'maṇḍalas' for various purposes.

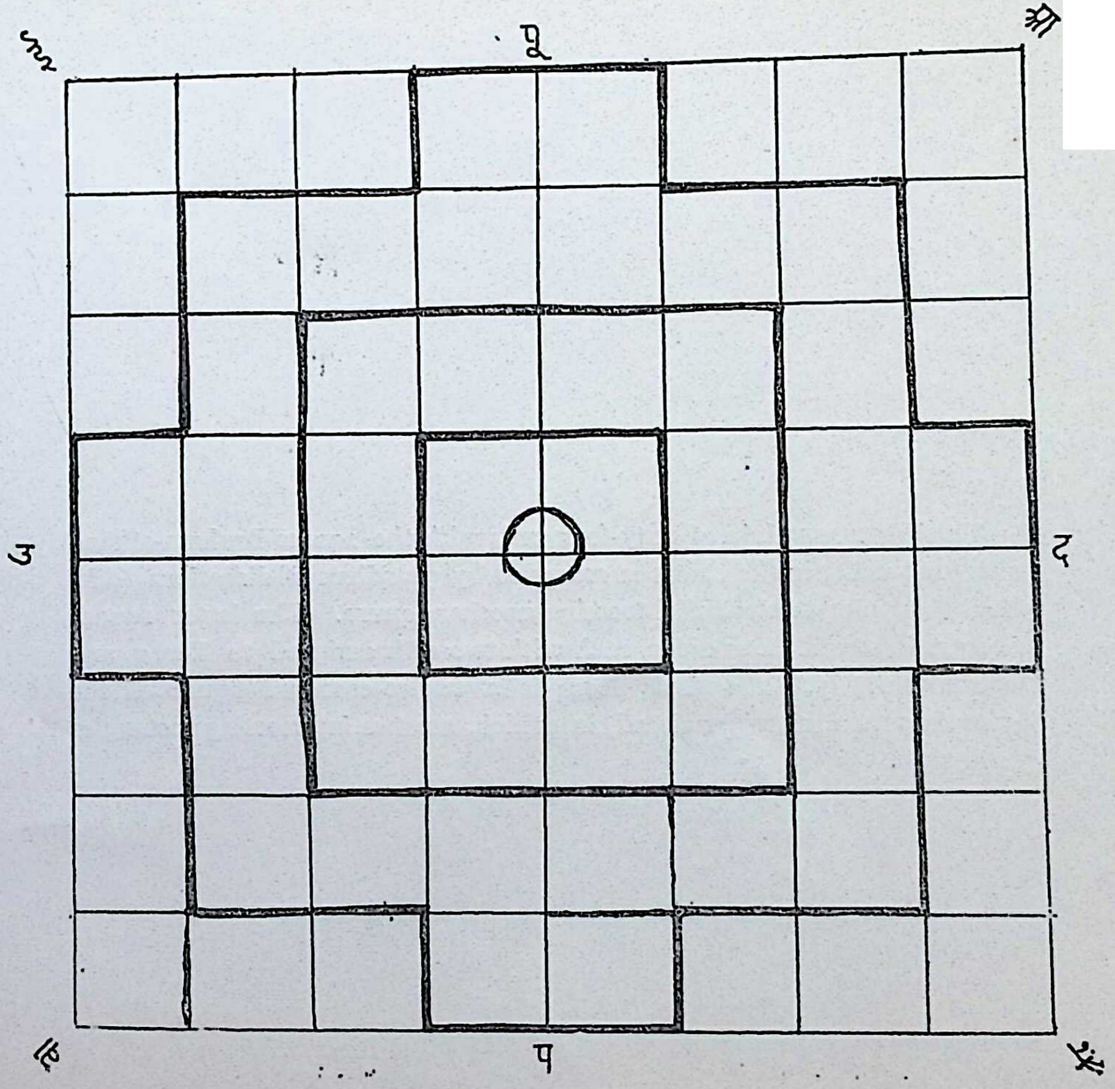


Fig. 35

Figure : 36

The Vāstu-maṇḍala of sixty-four cells with the square Brahma-sthāna (with four cells) in the centre surrounded by guardians of directions (dik-pālas) occupying twelve cells, forming another square. The latter square has entrances on all four sides, each with two cells assigned to Kāma and Dhātā alternately. The whole form is a twelve-cornered figure of the Sarvatobhadra variety, enclosed in which are two intersecting rectangles (pushpaka).

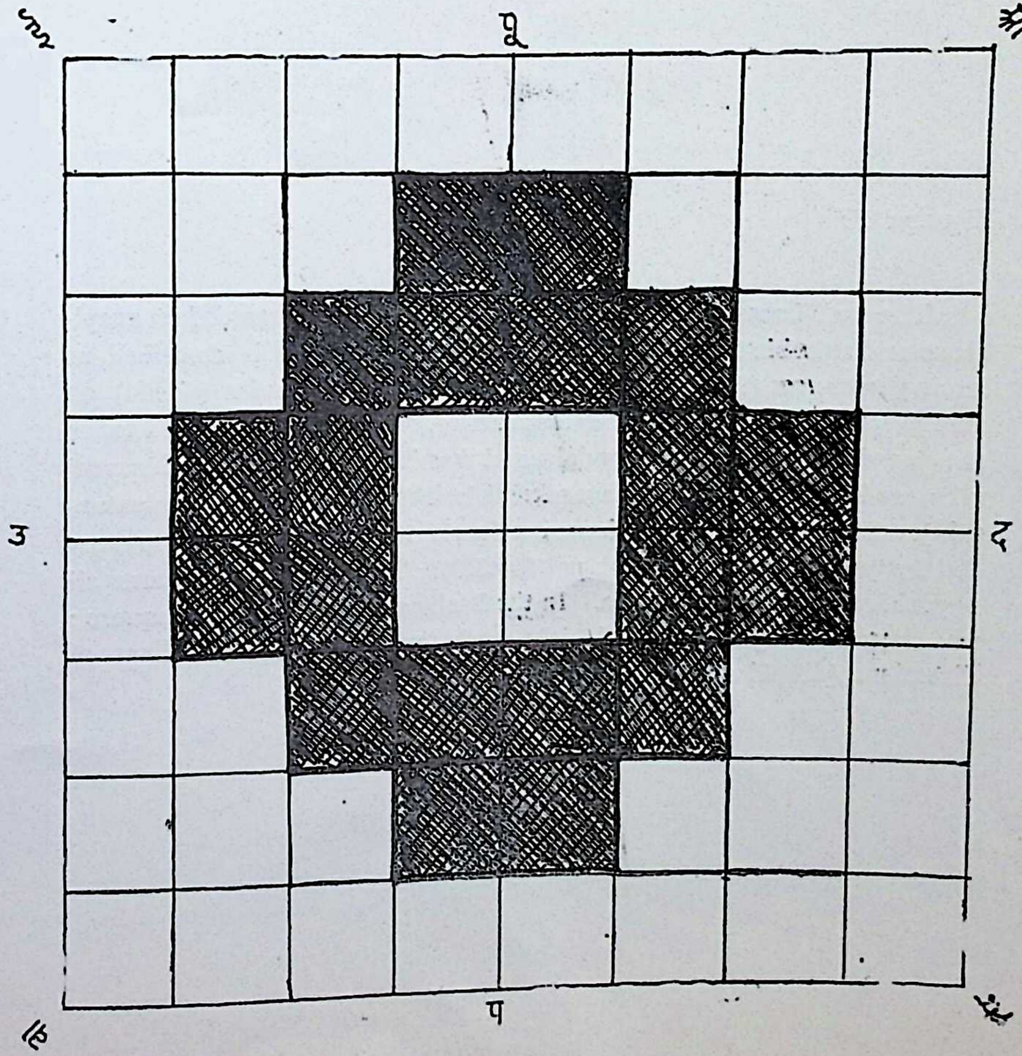
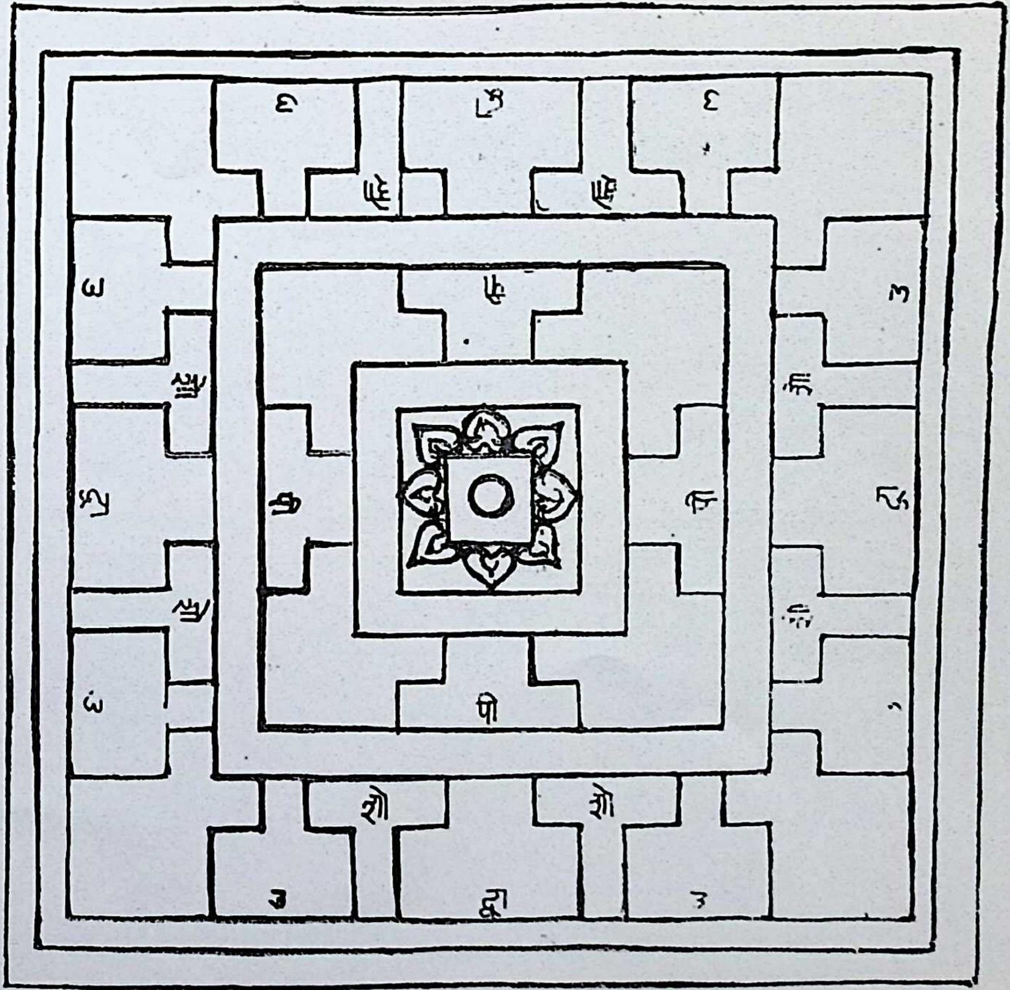


Fig. 36

Figure : 37

The well-known Sarvatobhadra maṇḍala, which is regarded as auspicious and suitable for all buildings and all occasions. It is described as having entrances (dvāra) and free corridors or outer verandas (alinda) on all sides, but facing East (cf. *Bṛhat-saṁhitā*, 53, 31). Indra is said to be the guardian-spirit of this maṇḍala, and worshipped in it are the 'dānavas' who are its 'guardians' ('dānavarakshakās śchaiva pūjyās te chātra yatnatah'). The total number of doors are fourteen and the maṇḍala is surrounded by 'pedestal-bands' ('pīṭha-paṭṭāvṛtāh'). This diagram eliminates all opposition and secures success. In the Brahma-sthāna, there is a square ; and there is an open lotus with eight petals (representing the guardians of directions (dikpālas).

Fig. 37



द्वा - द्वार , शो - शोभा ; उ - उपशोभा ; पी - पीठ

Figure : 38

Another arrangement of the Sarvatobhadra maṇḍala, which is used in worship rituals, especially in the worship of Gaṇapati. But this design is involved in the ceilings of temples.

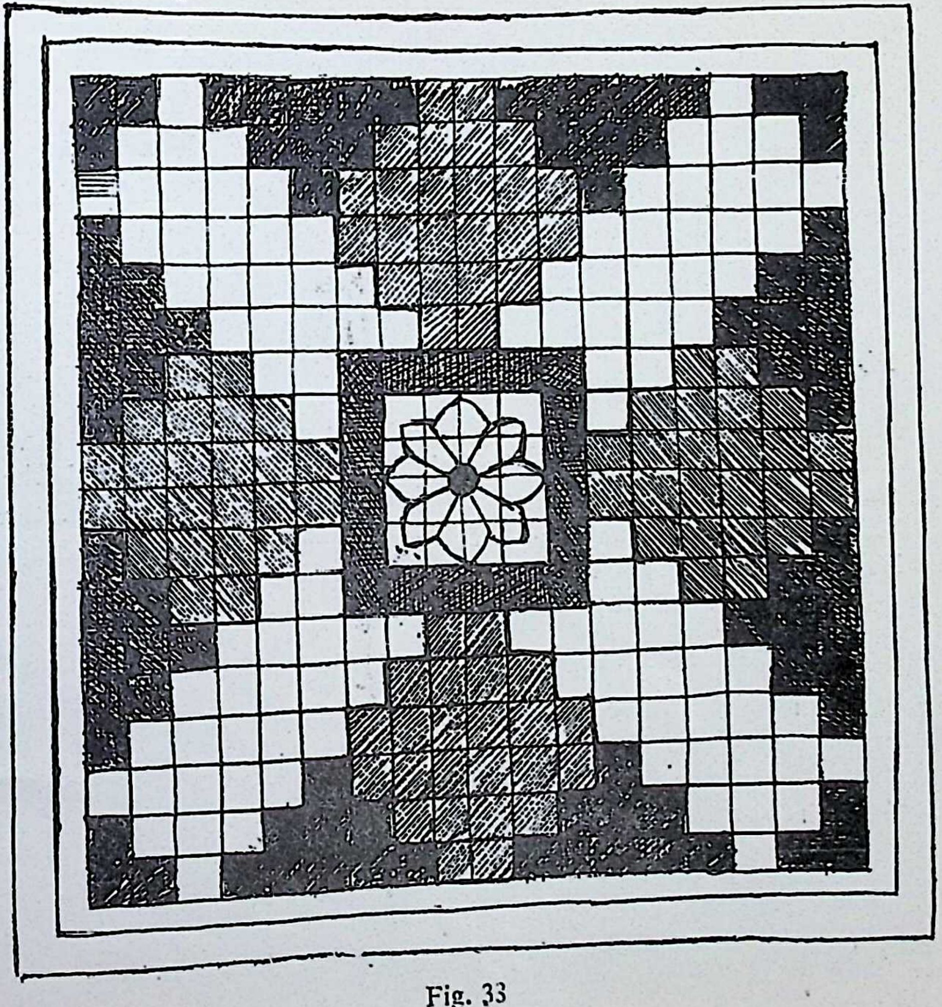


Fig. 33

Figure : 39

The Sarvatobhadra design is employed with some modifications in the construction of temples. The ground-plan given here is that of the Vaikuṇṭha-perumāḷ temple at Kāñchīpuram, built by the Pallava king, Nandi-Varman (731-796 A.D.)

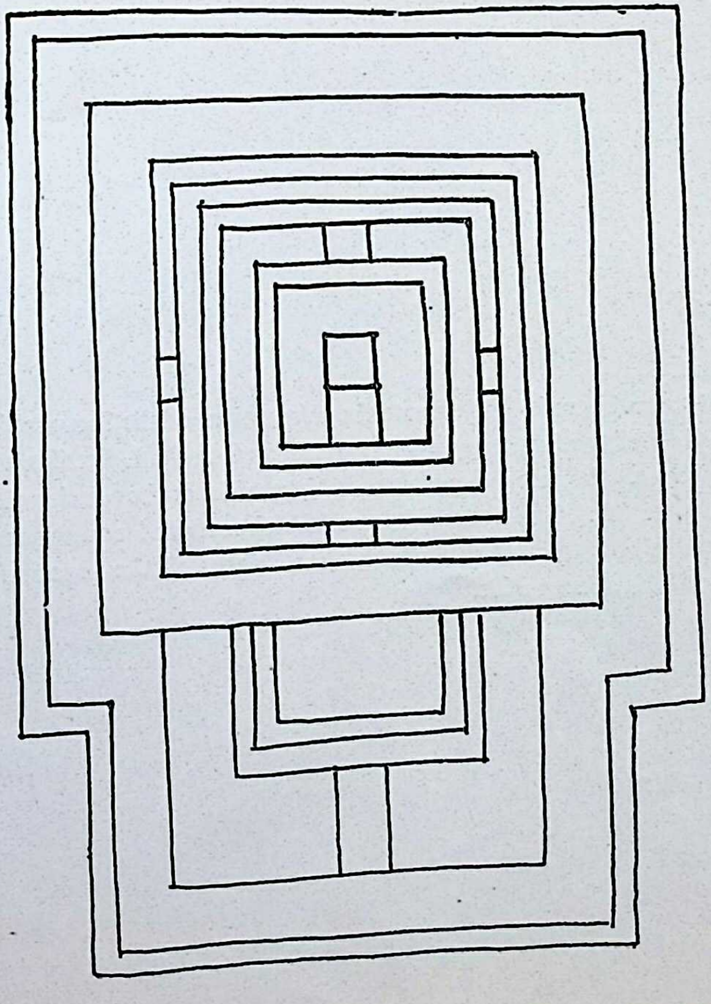
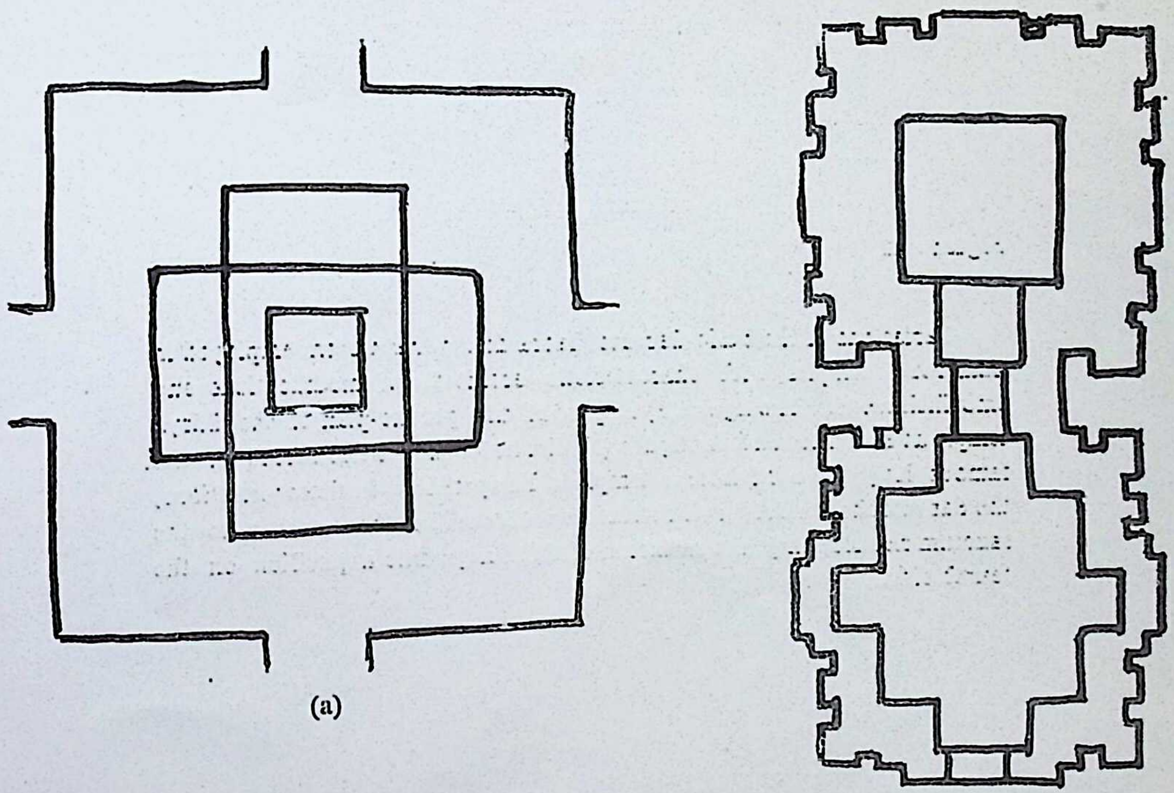


Fig. 39

Figure: 40

The figures (a) and (b) illustrate the adaptation of the Sarvatobhadra design in the Daśāvatāra temple at Deogarh and in the Liṅgarāja temple at Bhuvaneśvar. Identity of plan on all four sides is the distinguishing design in figure (a). The figure (b) is more elaborate and ornate, and the Sarvatobhadra design is adapted both for the area of the sanctum and for the pavilion in front of it.



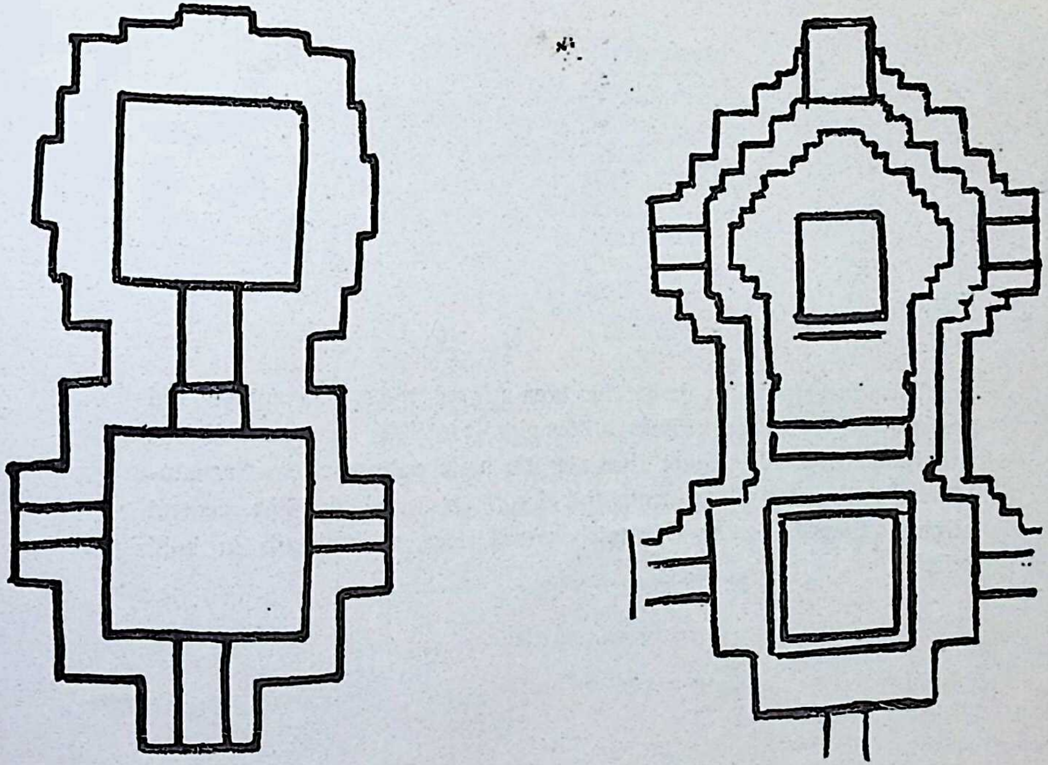
(a)

(b)

Fig. 40

Figure: 41

Variations of the basic Sarvatobhadra design have been employed in numerous temples with characteristic architectural modifications and embellishments. The figure (a) is part of the ground-plan of the Sūrya temple at Koṇārka, and the figure (b) illustrates the central shrine of the famous Kaṇḍariya Mahādeva temple at Khajuraho. In these variations, the Sarvatobhadra design is retained on three sides, the entrance to the sanctum necessitating the extension of this design into a pavilion on the fourth side.



(a)

(b)

Fig. 41

Figure : 42

The Sarvatobhadra design has been utilized to best advantage and aesthetic effect in the ceilings of temples, especially where the slab is square in shape. The figure ilustrates the basic pattern of the Sarvatobhadra ceiling, on which sculptural decorations are laid. The central circle is shaped like an elaborately carved lotus, with details in bold relief.

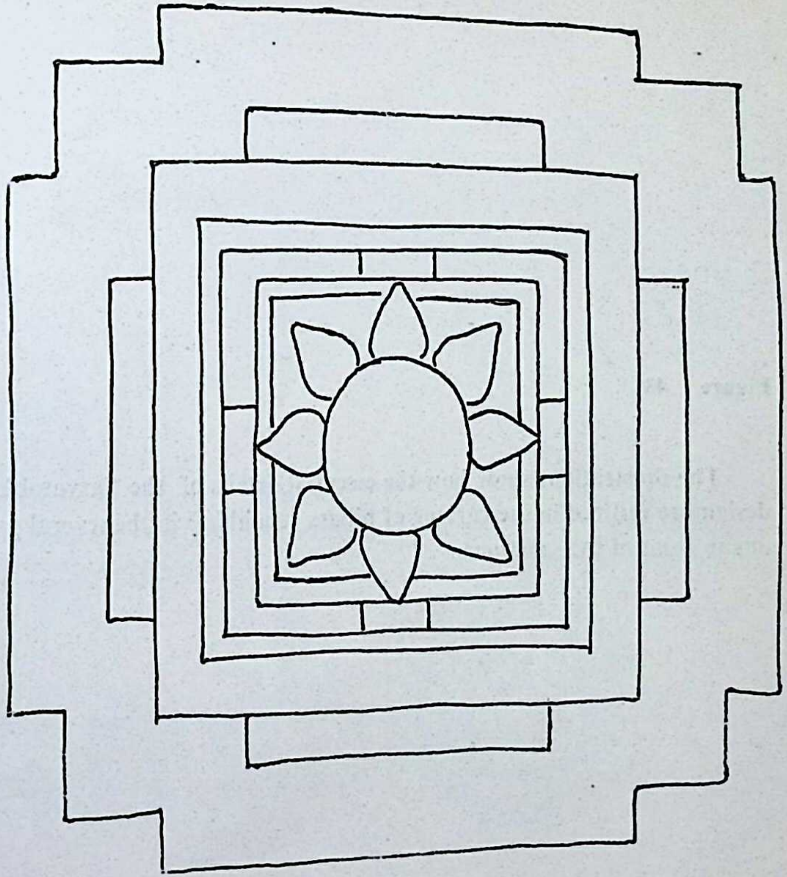
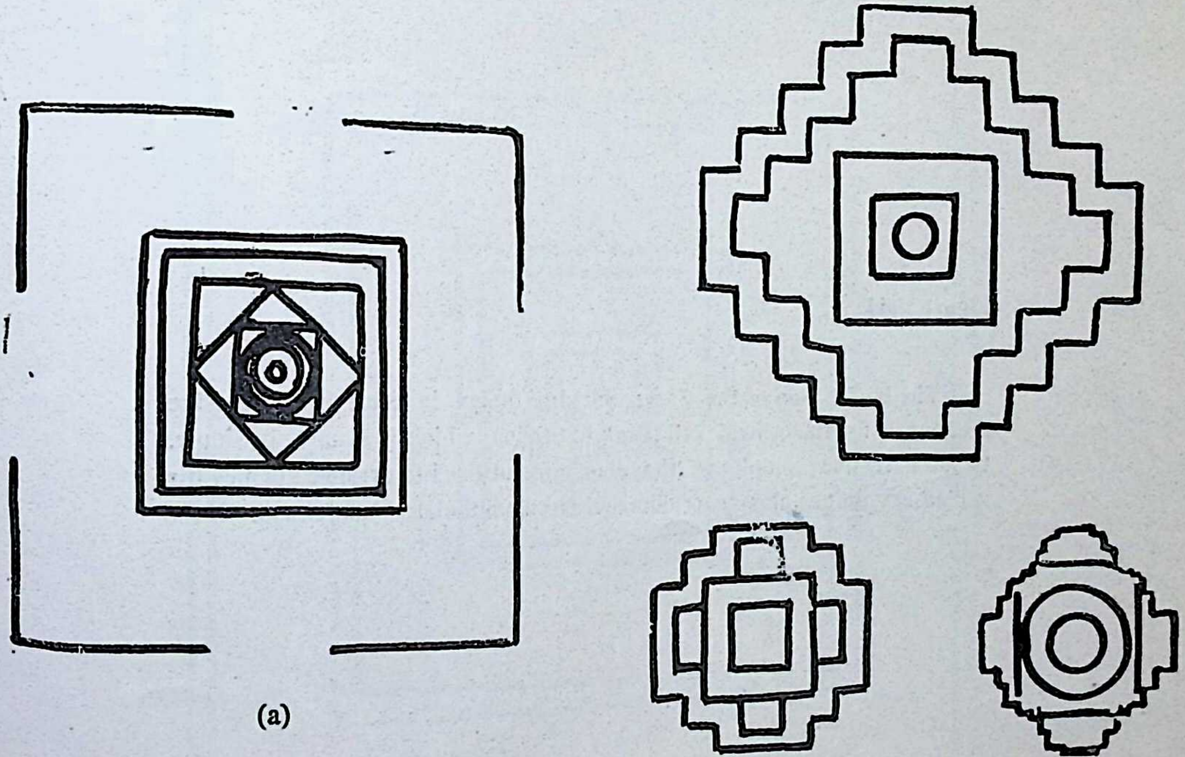


Fig. 42

Figure : 43

The illustrations show how the essential details of the Sarvatobhadra design are utilized in the carving of pillars (staṁbha) in the several pavilions in front of the sanctum.



(a)

(b)

Fig. 43

Figure : 44

The basic plan of the Sarvatobhadra design in terms of successive enclosures for the central cell (Brahma-sthāna) which is square in shape. In later temple complexes, the plan was utilized to arrange shrines for subsidiary deities along corridors and circumambulatory pathways.

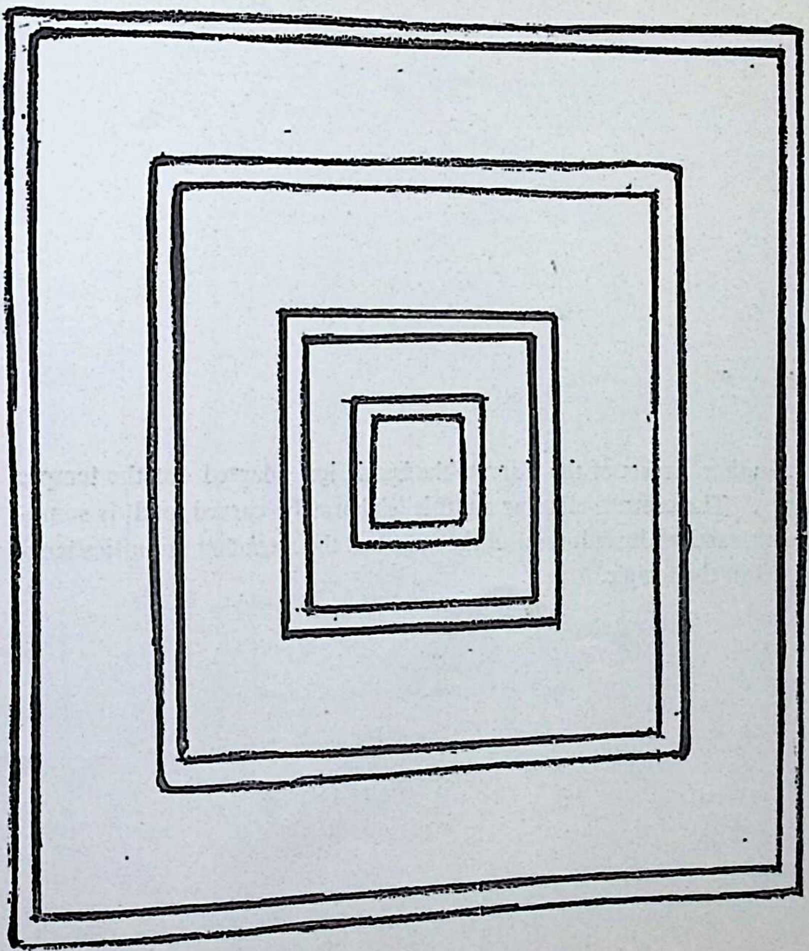


Fig. 44

Figure : 45

Another aspect of the Sarvatobhadra design adapted for the temple ceilings. The central circular motif is elaborately carved, and is sometimes covered with sculptures of the main and the attendant divinities worshipped in the temple.

Fig. 45

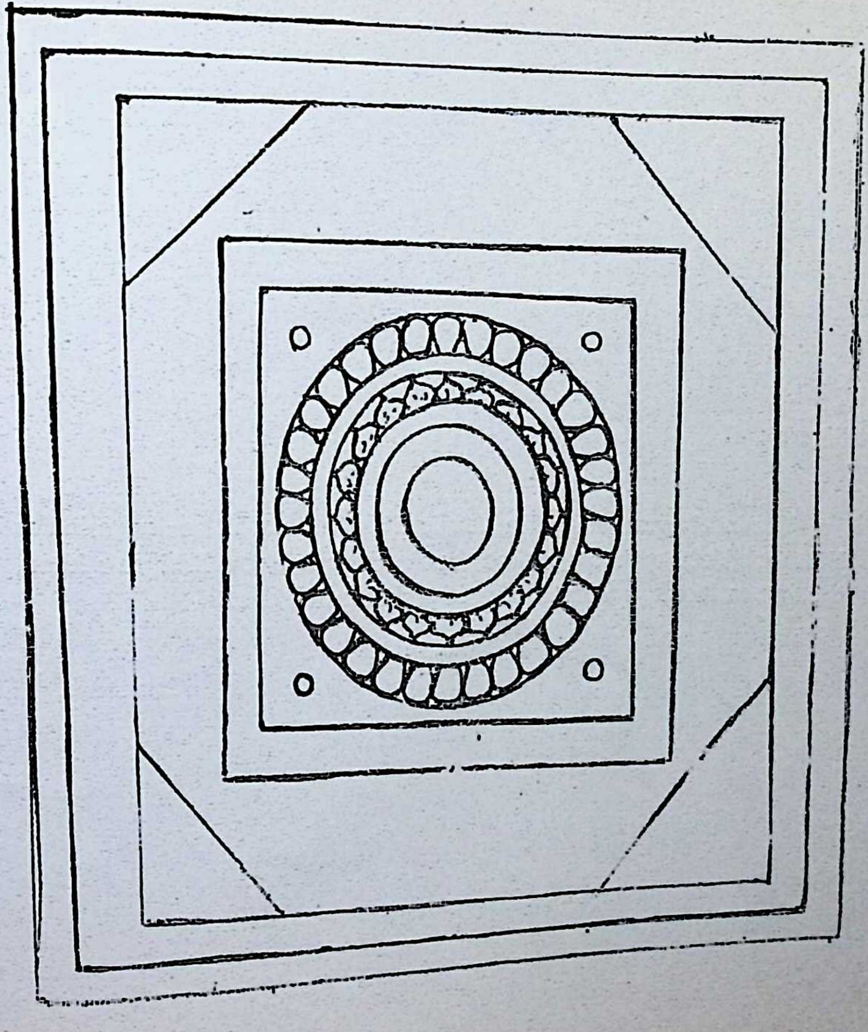


Figure : 46

The involvement of specific details of the Sarvatobhadra design in the Vāstu-maṇḍala with suggestions for the sanctum in the Brahma-sthāna, the first enclosure, and installation of parivāra divinities.

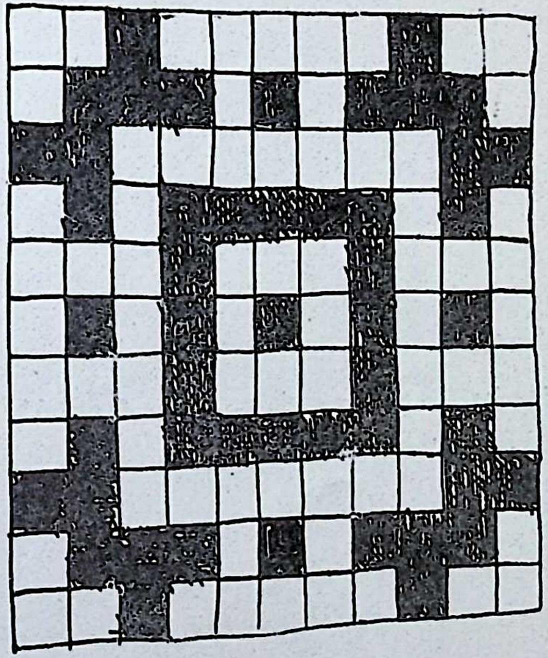


Fig. 46

Figure : 47

The drawing illustrates a variation of the Sarvatobhadra-maṇḍala employed in temples in the coastal region.

Fig. 47

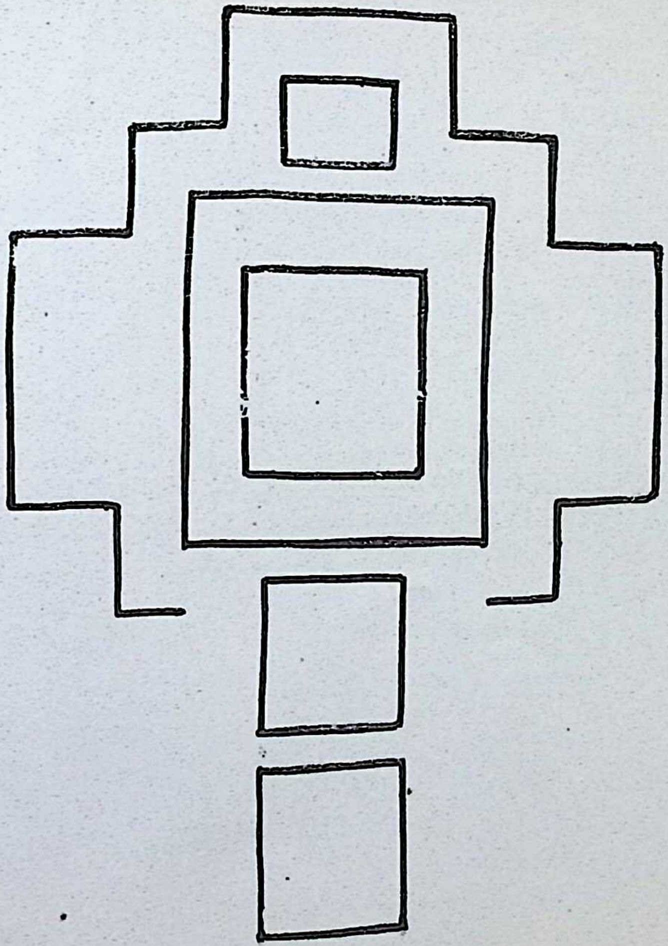


Figure : 48

The ground-plan of the main portion of the Mañjunātha temple at Kadri (in Mangalore), which has utilized the Sarvatobhadra design partially.

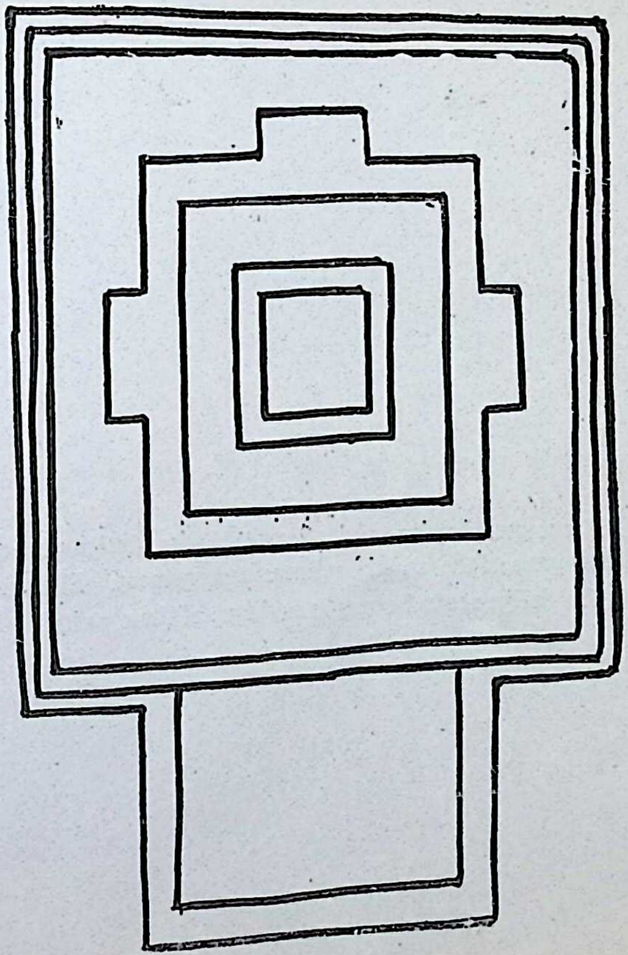


Fig. 48

Figure : 49

A significant modification of the Sarvatobhadra design in accommodating several parts of the temple in linear arrangement. Elements of the Sarvatobhadra design are to be seen in each one of these parts.

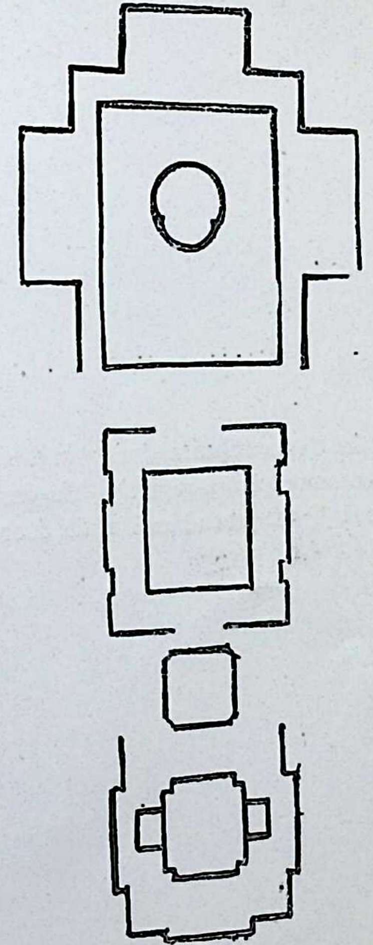
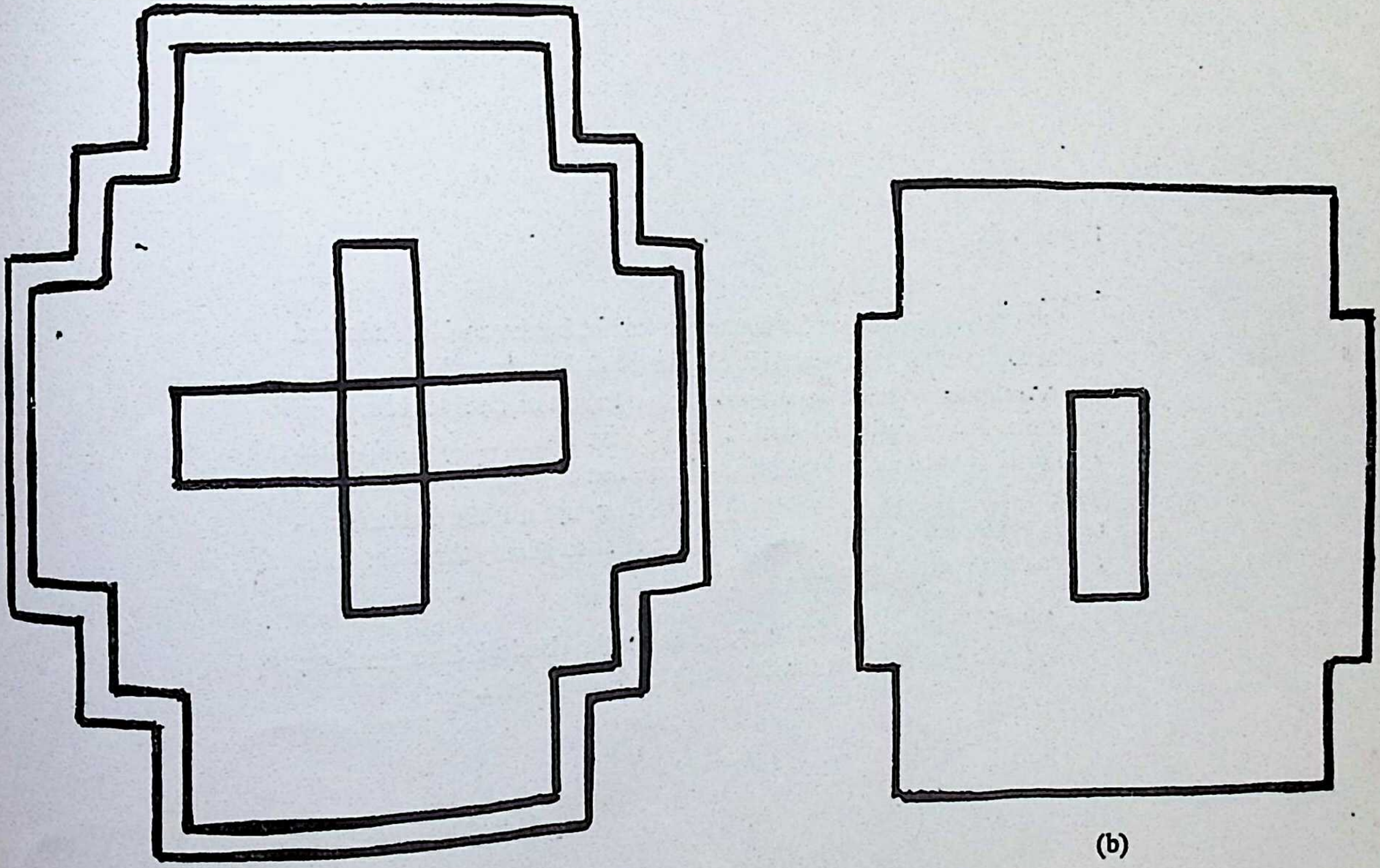


Fig. 49

Figure : 50

Adaptation of the Sarvatobhadra design in the plan of the superstructure over the entrance (dvāra-gopura). The drawings illustrate (a) the basement level, and (b) the ground level of the door-tower.



(a)

(b)

Fig. 50

Figure : 51

The Nandyāvarta plan for houses and temples has been widely adopted in the country. *Bṛhat-saṁhitā* (53,32) describes this plan as having four, separated outer verandas on each side, and entrances on all sides except on the West. But in the architectural texts, we have square or circular forms with distinct verandas, which give an impression of general inclination to the South, while the *Bṛhat-saṁhitā* prohibition against the western entrance is not adhered to. There is also a mention of only three verandas with a Southward orientation.

Actual illustrations, however, combine the classical Svastika form (which has an entrance on the East) with the Nandyāvarta.

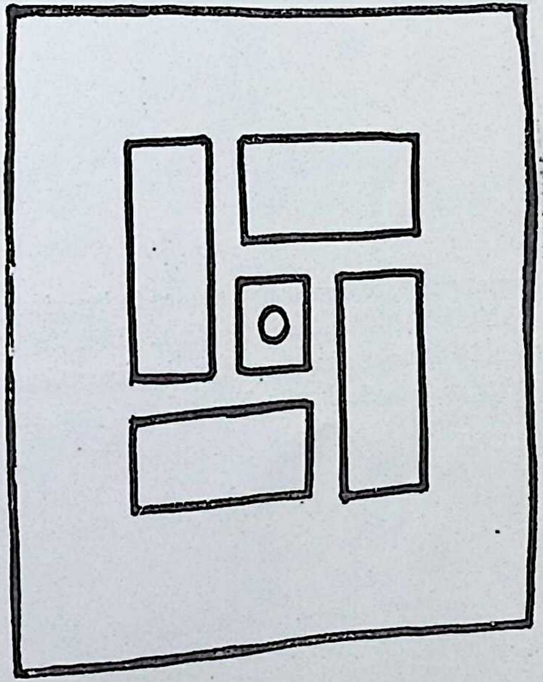


Fig. 51

Figure : 52

Nandyāvarta plan accommodating the enclosing circle, and inner square site within which the plan is contained. Division of the corners of the square in Nandyāvarta segments is an important feature. Combination of square and circle in the Nandyāvarta plan can be noticed here.

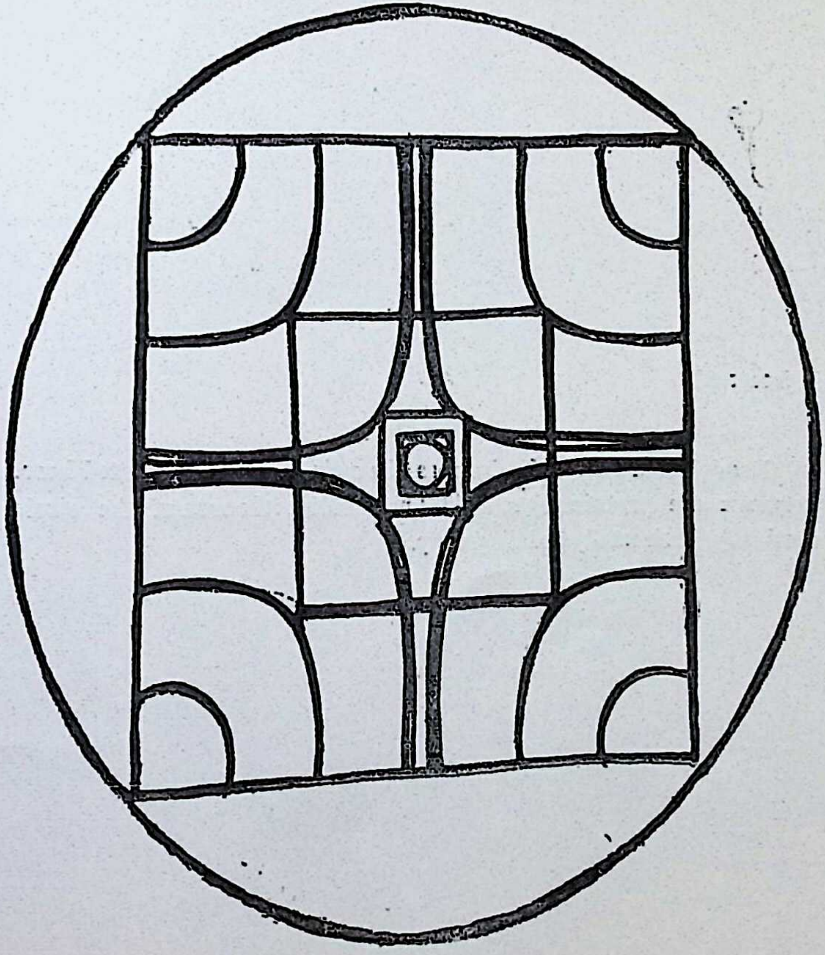


Fig. 52

Figure : 53

Nandyāvarta plan with circle as the main form is illustrated here. Segments are produced by straight lines dividing the area of the circle vertically, horizontally and diagonally.

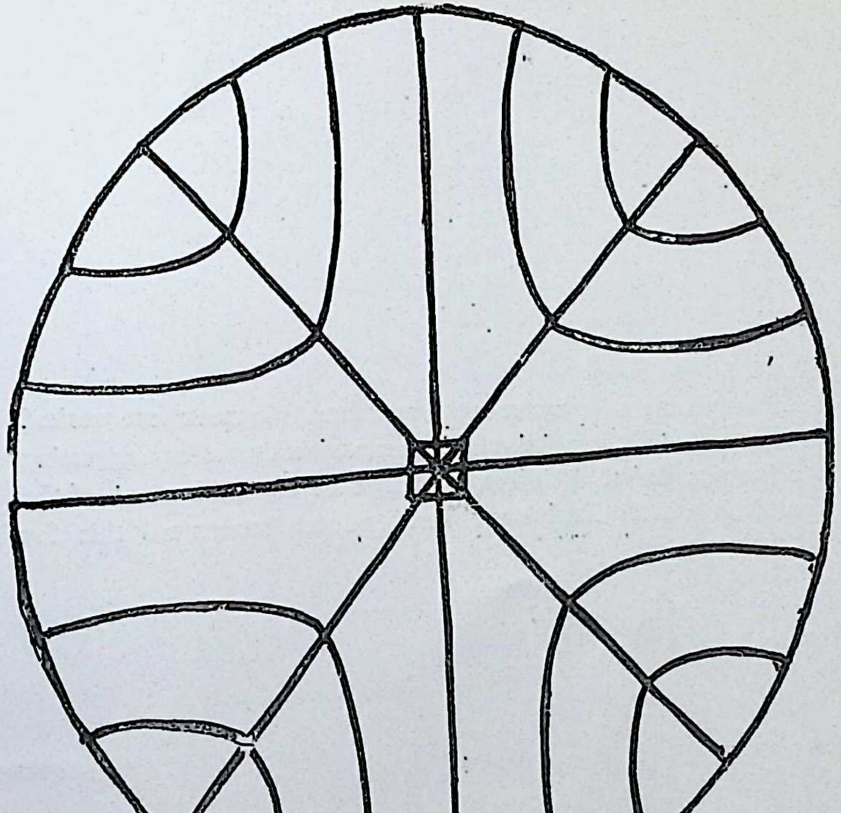


Fig. 53

Figure : 54

Nandyāvarta with square as the basic form. Segments are worked out as arms moving in a clock-wise fashion (pradakshiṇa order) suggesting the Svastika design. This is an illustration of the involvement of the Svastika idea in the Nandyāvarta plan. And texts recommend this for town-planning.

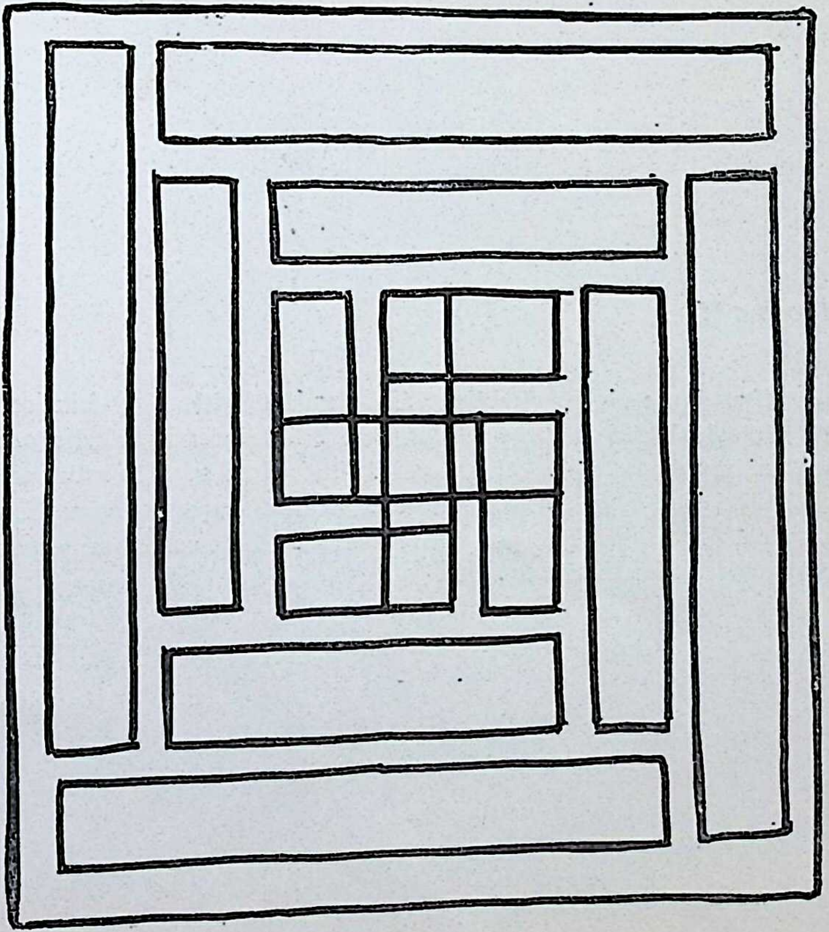


Fig. 54

Figure : 55

The figure shows circular Vāstu-maṇḍala with sixty-four cells (koshṭhas), shaped like the petals of a lotus. The innermost circles (concentric) represent Brahma-sthāna, which also is circular. The entire area is divided into four segments, the straight lines representing the four cardinal directions. This provided the basic form for numerous yantras and maṇḍalas for ritual worship.

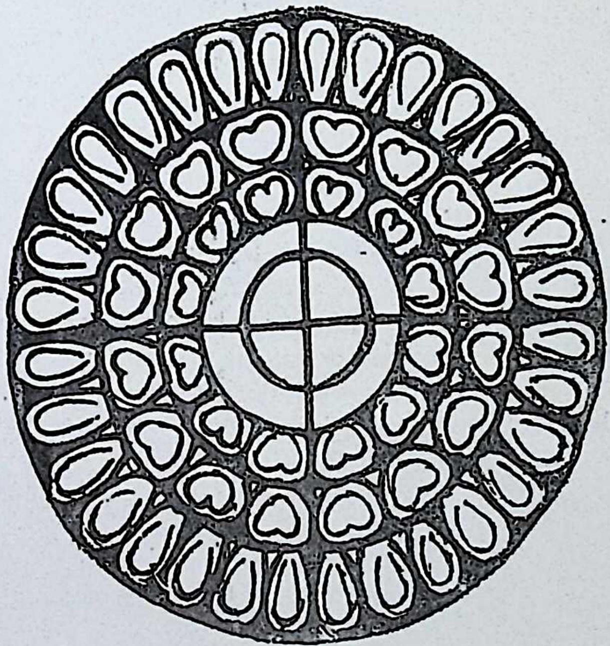


Fig. 55

Figure : 56

The Padmaka plan incorporating the Sarvatobhadra idea is illustrated here. It basically consists of square patterns accommodating intersection of rectangles. The eight-sided figure (ashṭāsra) within the outer square is the main element of the Padmaka plan.

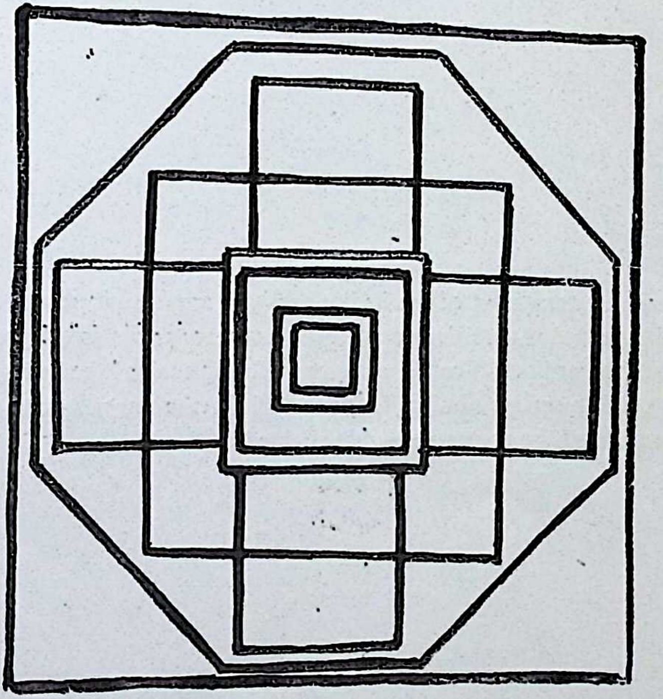


Fig. 56

Figure :: 57

Another treatment of the Padmaka plan, emphasizing the lotus motif. The eight-sided figure is provided with twelve petals in all (one petal in each of the cardinal directions, and two facing each of the inter-directions (vidik).. The square design is preserved in the inner apartment. The intersection of the rectangles is highlighted.

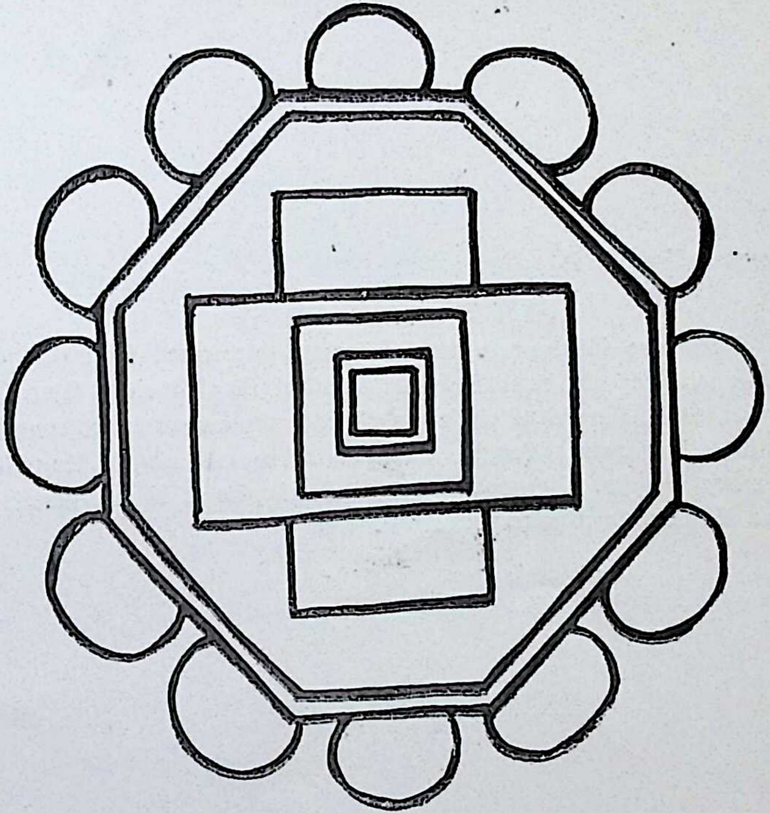


Fig. 57

Figure : 58

The figure illustrates a more elaborately structured Padmaka plan. While retaining the basic Padmaka detail of the eight-sided figure and twelve petals, the central circle is enclosed in three squares, and contained within a horizontal rectangle. This plan is frequently adapted for ceilings in many temples. The special feature of this plan as shown here is the idea of combining square with circle.

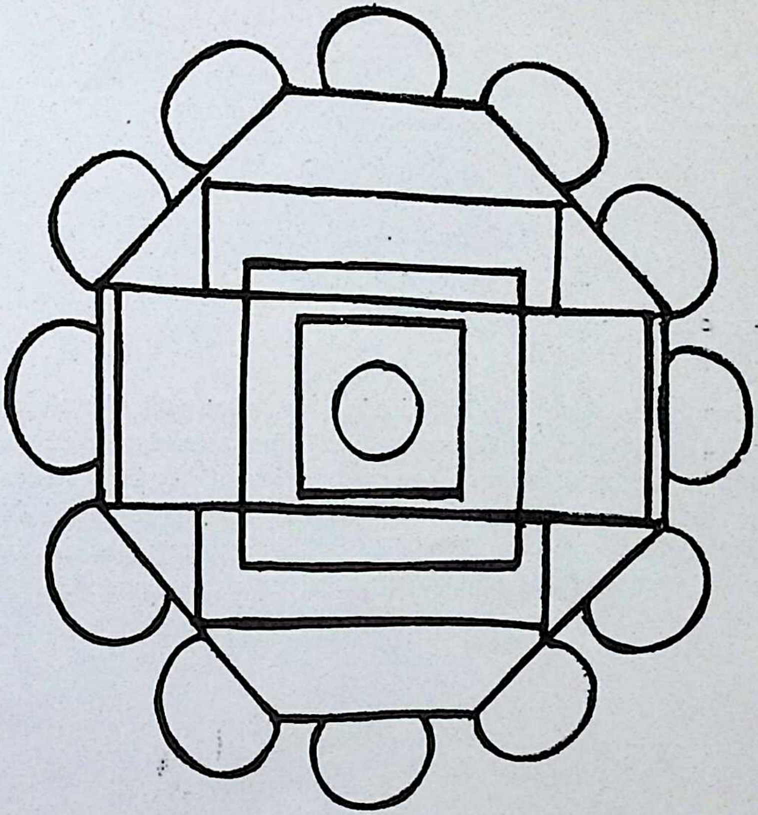


Fig. 58

Figure : 59

Another variation of the Padmaka plan, often utilized in the treatment of ceilings over pavilions in temples. This accommodates the Sarvatobhadra design in all details. The introduction of karṇikās between the petals in the outer eight-sided figure and their absence in the inside is to be noted. The twelve petals on the outside are to represent the twelve forms of the Sun (dvādaśa-āditya) which make the lotus open up.

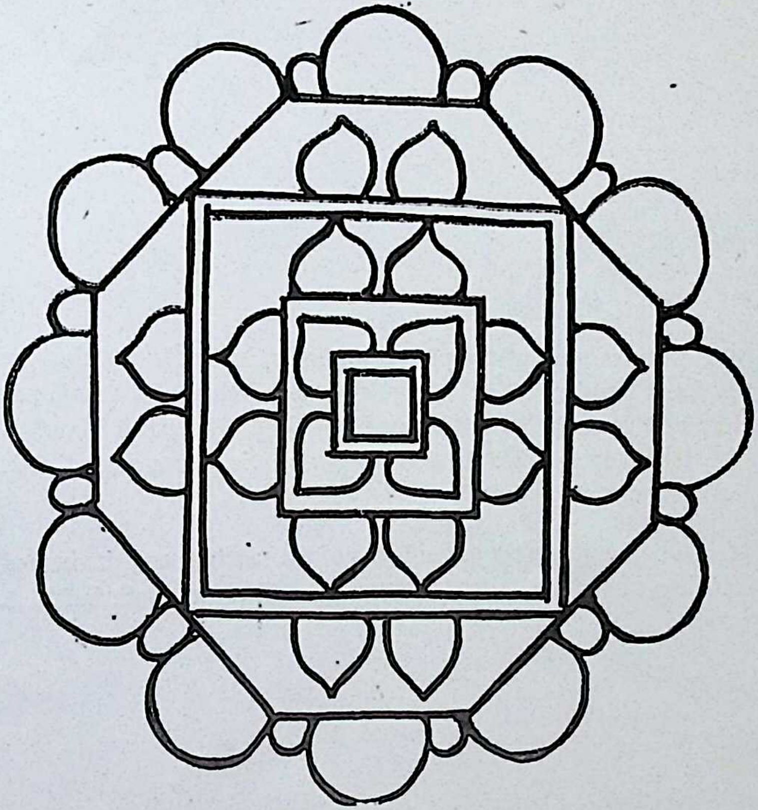
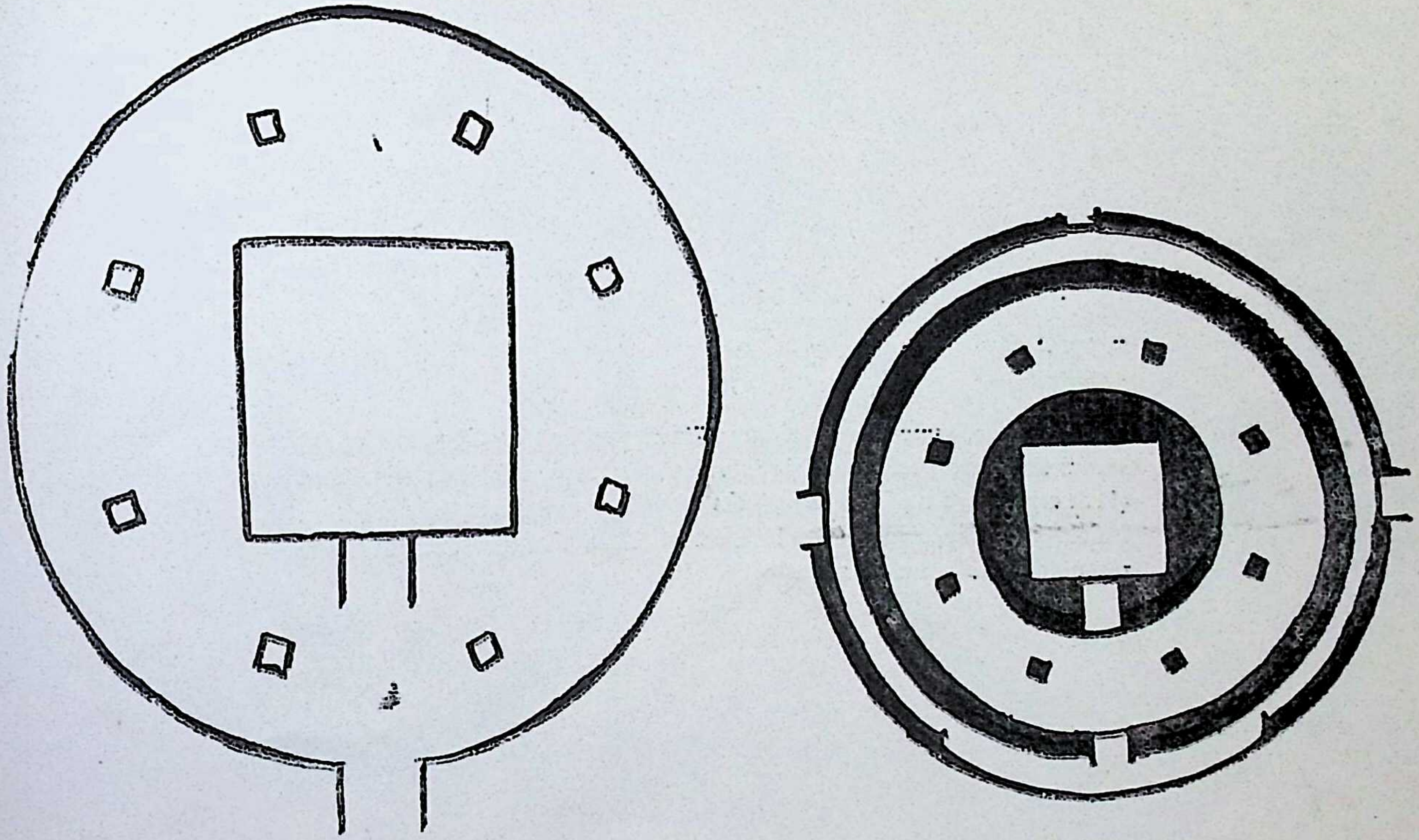


Fig. 59

Figure : 60

The circular type of temples is common in Kerala and the coastal Karnataka. The drawing (a) shows the ground-plan of the main part of the temple at Peruṁpaḷadūr dedicated to Vishṇu (Nāraṇattu-kāvu Vishṇu temple), built around 858 A.D. The sanctum is square-shaped, but the immediate enclosure is circular.

The drawing (b) is the ground-plan of the sanctum and its immediate surrounding of the celebrated Śiva temple at Kaviyūr (built in 950 A.D.)



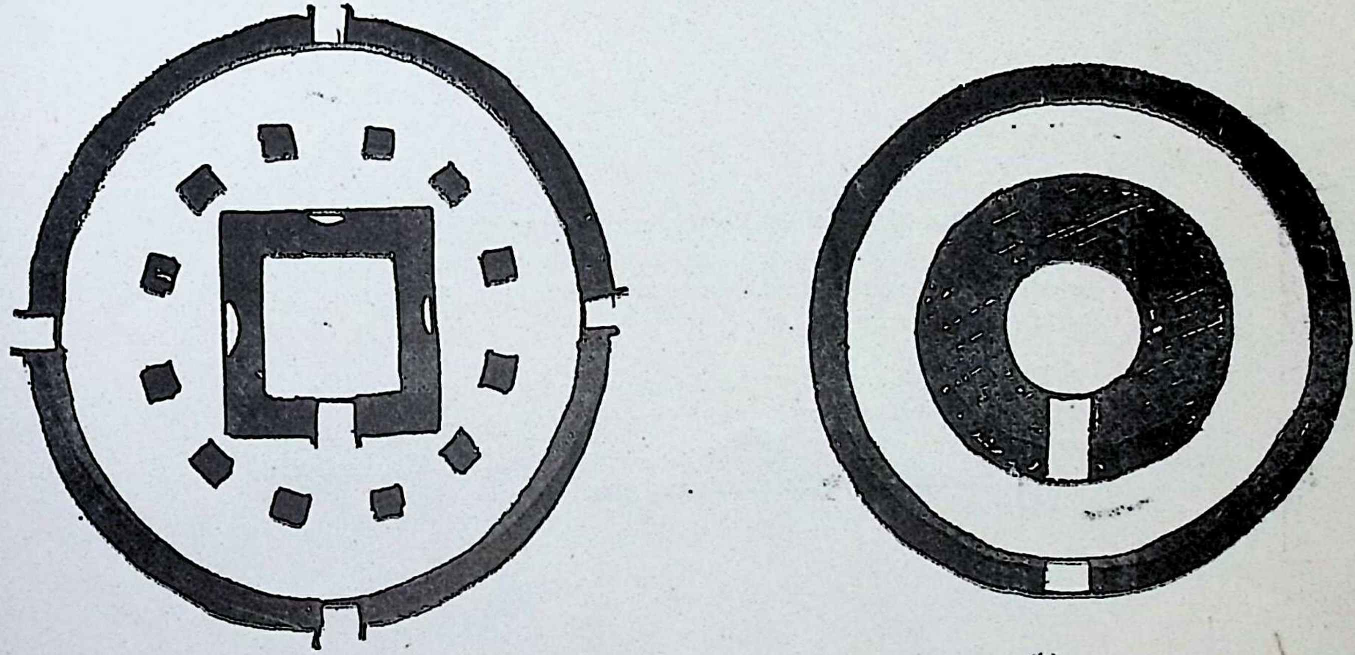
(a)

(b)

Fig. 60

Figure : 61

Two more examples of circular temples of Kerala. The drawing (a) shows the main portion of the Subrahmaṇya temple at Mañjeri Karikkāḍ (11th cent.), and the drawing (b) the ground-plan of a temple in ruins in Pulpaṭṭa (Malappuram) (also 11th cent.). Note that the sanctum also is circular in the latter example.



(a)

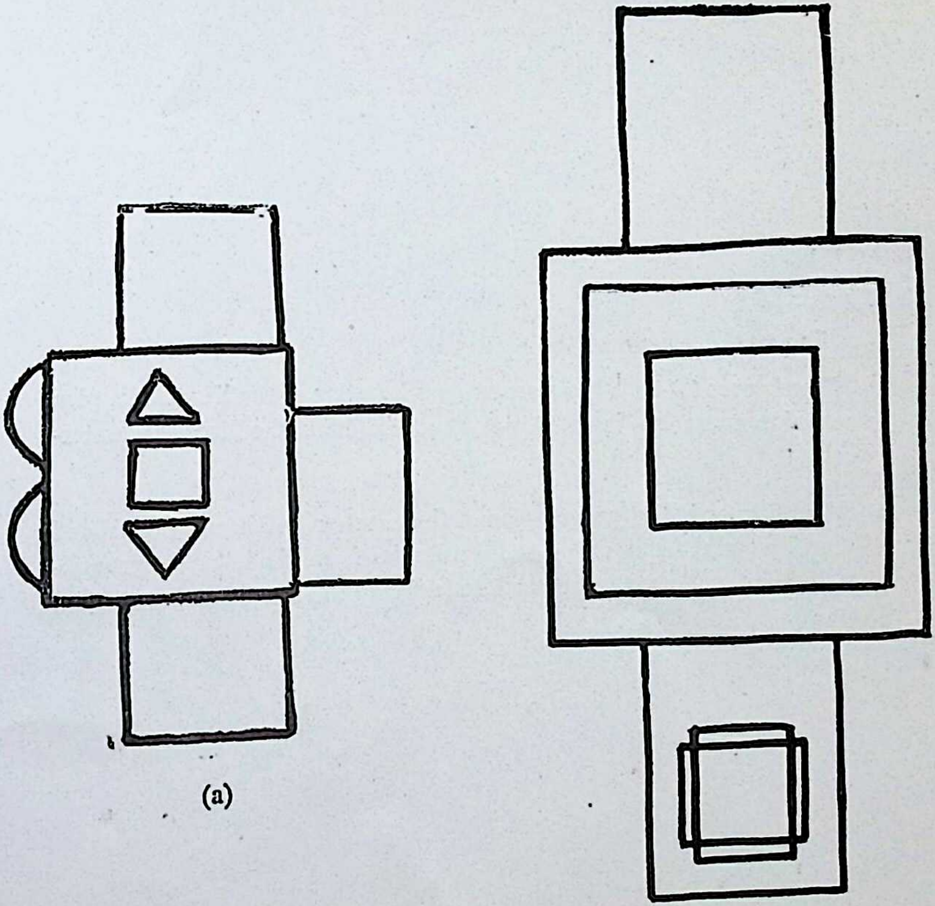
(b)

Fig. 61

Figure : 62

The textual shape of the Kumbhaka plan, resembling the hermit's water-vessel with a handle, spout and base. In actual practice, however, it tends to assume a shape with the belly, base and mouth (viz. without handle or spout at the side).

The figure (a) shows the textual plan, while the figure (b) shows how the plan is adopted in a temple (with the sanctum taking the place of the mouth, the assembly hall in front of the sanctum the belly, and the entrance hall the base of the water-vessel plan.



(a)

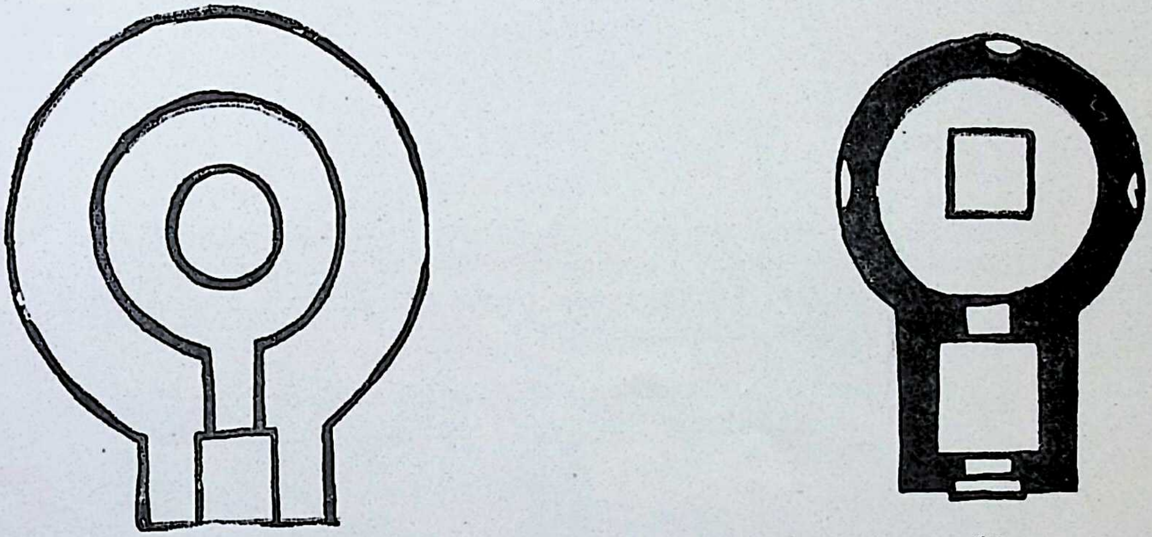
(b)

Fig. 62

Figure : 63

The figures (a) and (b) represent an adaptation of the Kumbhaka plan to resemble more an inverted pot (kumbha) than the hermit's water-vessel.

The former is the ground-plan of the sanctum and its neighbourhood of the Chaitya at Guṇṭapalle (Andhra Pradesh) and the latter the ground-plan of the same portions of the Paraśurāmeśvara temple at Tiruvaḷḷam (Kerala).



(a)

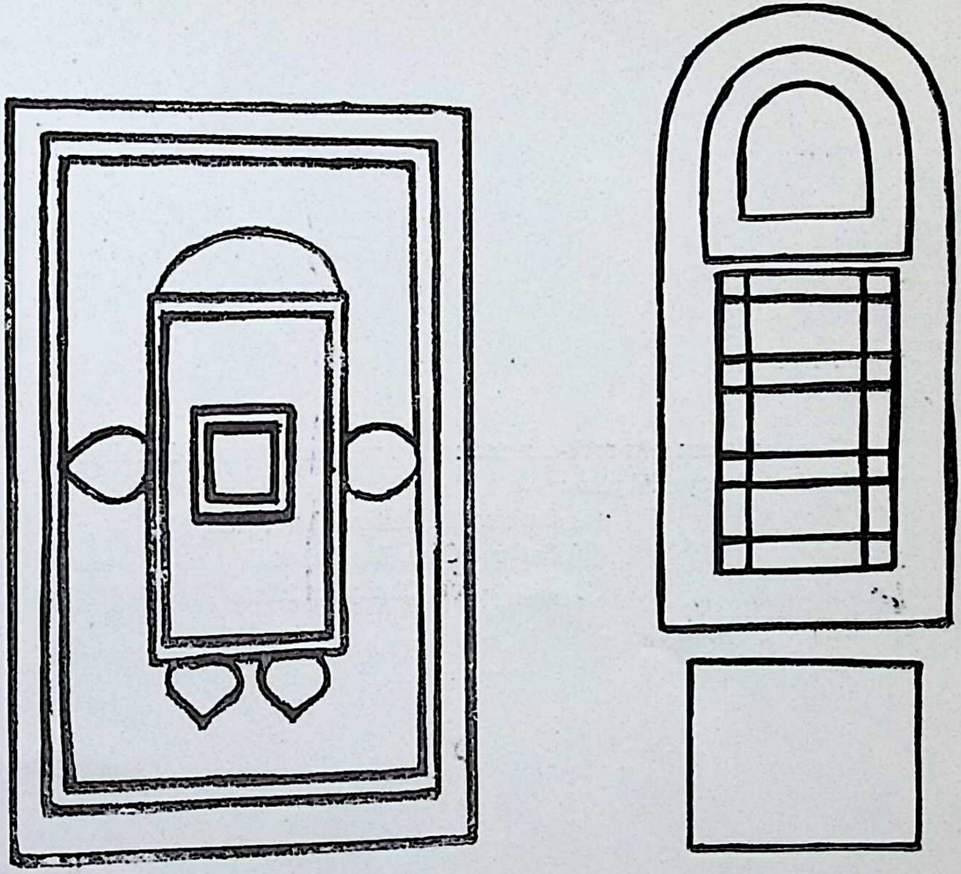
(b)

Fig. 63

Figure : 64

The figure (a) illustrates the textual shape of the Paraka plan of temples and residences. It is distinguished by a rectangular shape (the length of the building) with an apsidal structure at the farthest end. The other end represents the entrance.

The figure (b) is an adaptation of this plan in a temple consisting of an apsidal sanctum, a rectangular assembly hall and a squarish entrance pavilion.



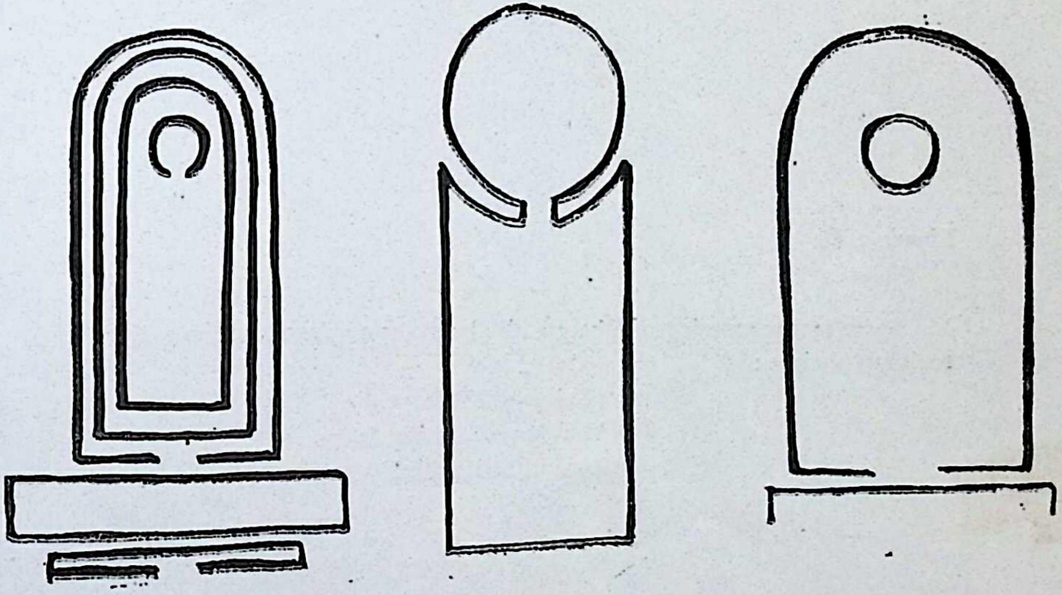
(a) (b)

Fig. 64

Figure : 65

There are numerous rock-cut and early structural stūpas and chaityas which adapt the apsidal plan :

(a) Cave no. 26, in the Ajaṇṭā group
(b) Sudāma Cave, Barabar Hills
(c) Pāṇḍu-leṇa, Chaitya at Nāsik



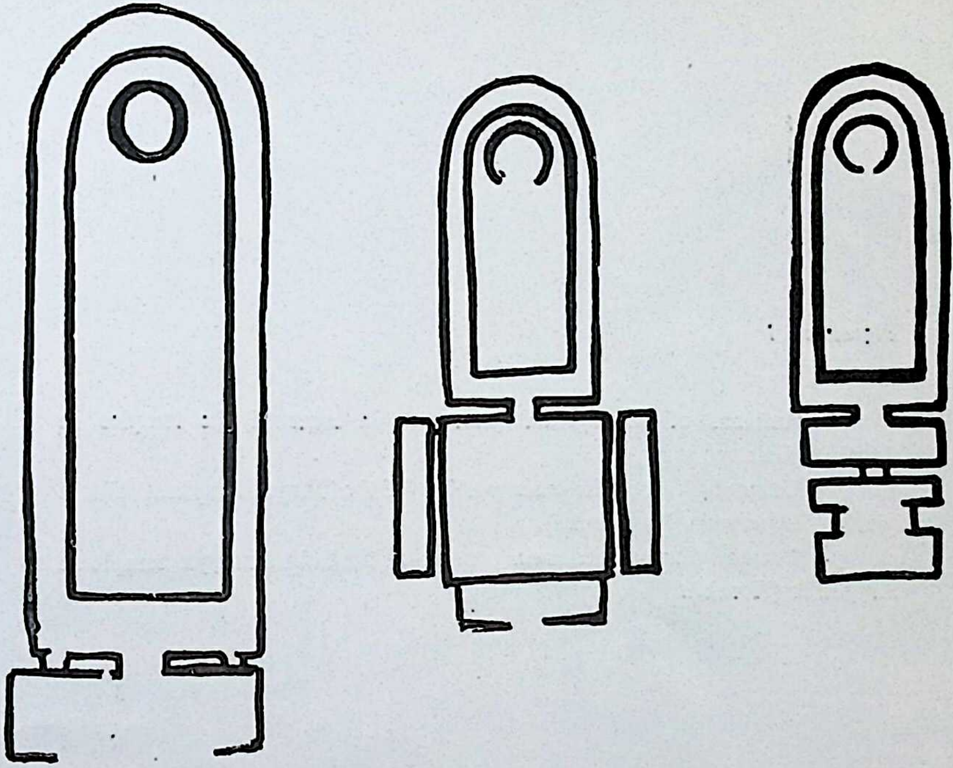
(a) (b) (c)

Fig. 65

Figure : 66

Some more examples of the apsidal plan being employed in the early rock-cut shrines :

(a) Chaitya at Kārle
(b) Viśvakarmā Cave at Elūra
(c) Chaitya at Kāṇheri



(a) (b) (c)

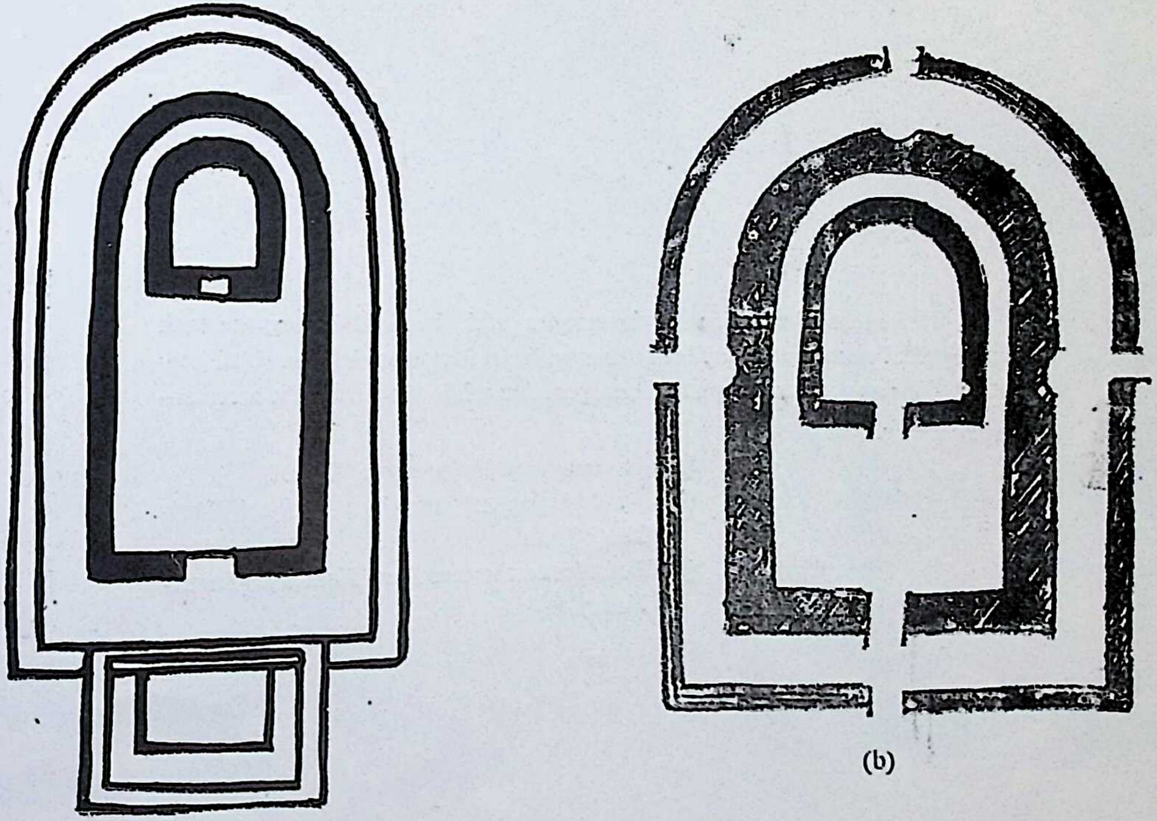
Fig. 66

Figure : 67

Illustrations of the apsidal plan seen in some of the temples in South India :

(a) Ground-plan of the main portion of the Durga temple at Aihoḷe (early Chāḷukyan) (Karnataka).

(b) Ground-plan of the main portion of the Subrahmaṇya temple at Payyanūr (Kerala).



(a)

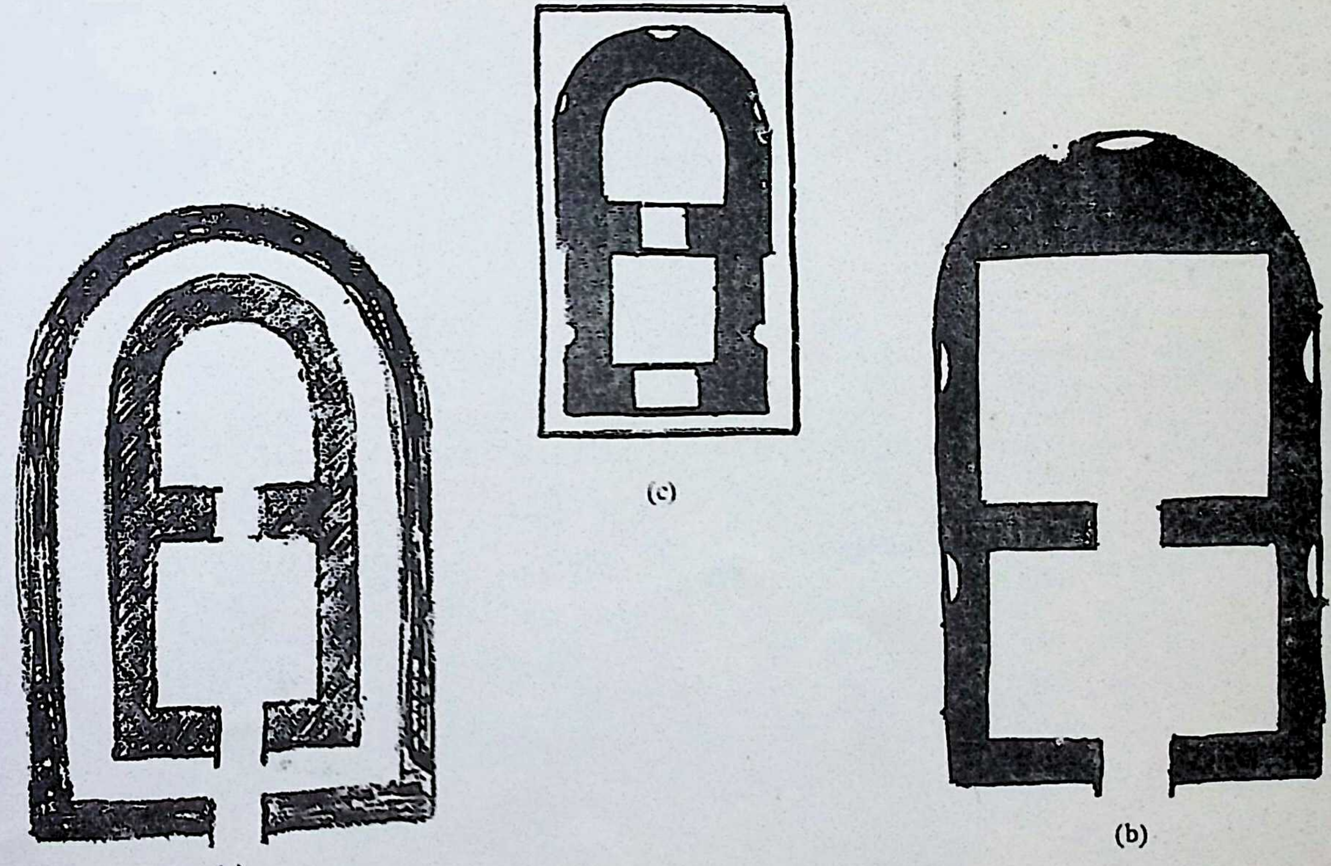
(b)

Fig. 67

Figure : 68

Two more illustrations of the temples with the apsidal plan, one with an apsidal sanctum (a), and the other with a rectangular sanctum (b). Note that the former has a square front pavilion while the latter has a rectangular one.

(a) Śiva temple at Neḍumpura (Kerala)
(b) Śāstā (Ayyappan) temple at Mañjeri Karikkāḍ (Kerala)
(c) Vīrattāneśvarar temple at Tiruttaṇi (Tamil-Nadu)



(c)

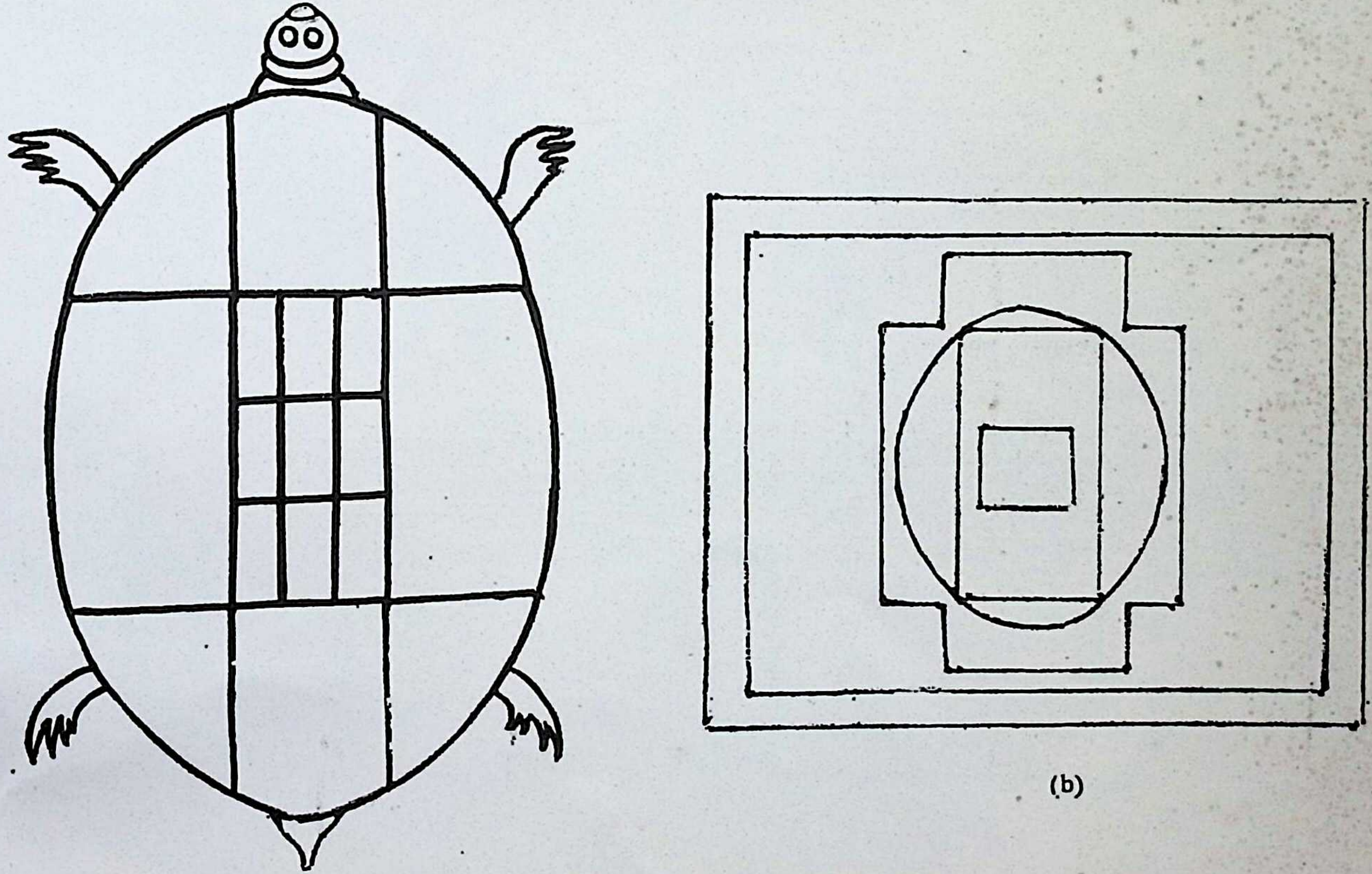
(a)

(b)

Fig. 86

Figure : 69

A variant of the Paraka plan is the double apsidal shape (viz. apsidal at both ends). This is known as the Kūrma-pṛshṭha plan (the back of the tortoise). The figure (a) shows the actual Kūrma-pṛshṭha design, employed as mantroddhāra diagram, and the figure (b) shows a variant of this plan involved in temple architecture.



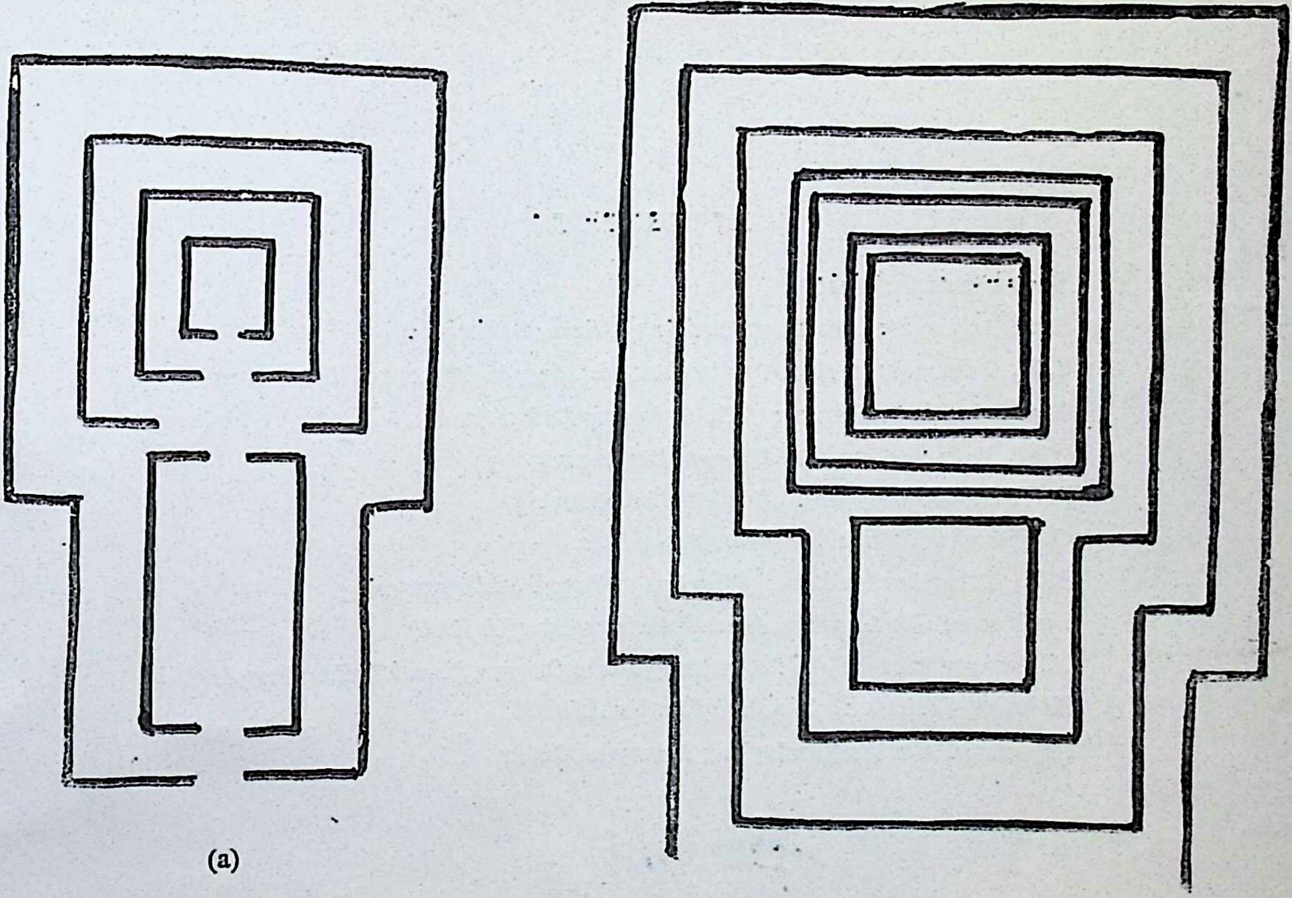
(a)

(b)

Fig. 69

Figure : 70

The Prakīrṇaka plan is distinguished by multiple and successive enclosures, known as āvaraṇa or prākāra. The figure (a) shows the general-plan, and the figure (b) its application in the inner portions of the Vaikuṇṭha-perumāḷ temple in Kāñchīpuram.



(a)

(b)

Fig. 70

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